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Analysis of Marine Expeditionary Brigade Training Areas

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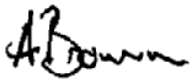

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Executive Summary

We analyzed areas in the continental United States (CONUS) that might support Marine Expeditionary Brigade (MEB) training. Starting from a set of MEB training requirements, we identified the physical areas and associated capabilities, required to support MEB training. Our analysis identified the strengths and shortfalls for each area, and methods of enhancing the capabilities of each area to meet the MEB training requirements.

Our starting point for this analysis was a set of MEB training requirements culled from Marine Air Ground Task Force (MAGTF) and MEB guidance, [1, 2]. The set comprised about 500 guidance statements targeting the MEB command elements and agencies, including Command Element (CE), Ground Combat Element (GCE), Air Combat Element (ACE), and Combat Service Support Element (CSSE), as well as supporting fires, air, and support agencies.

We developed an analytic method for translating each piece of MEB guidance into a requirement for the training environment. This lexical analysis sought to identify the Who, What, When, Where, and Why from each statement. Every guidance statement contained a Who, What, and Why—who is the training audience? What does the training environment need to have to support their training? And, why do they need to execute the training?

For example, the guidance:

> Command Element assesses shaping actions

requires that the training environment must at least include ***shaping actions*** (what) for the ***Command Element*** (who) to assess. The "what" exists to give the training audience the opportunity to practice the task ***assess shaping actions*** (why). There are many ways to provide this capability—real fires, targets, observers, and tactical communications—this guidance does not tell us about those methods. But other

guidance statements do. The point here is that *every* piece of guidance gives us a piece of the training range requirements.

The sum of all 500 MEB guidance statements yielded a lot of information about the physical training environment—what operations areas that environment must contain, and what supporting assets or actions the area must provide or support. We then looked at actual training areas in CONUS to see how facilities in different areas of the country could support the MEB training range requirements.

Our analysis focused on three regions; Southwest CONUS including Camp Pendleton, Twentynine Palms, and Yuma; the area around Camp Lejeune and Cherry Point, Mid-LANT; and the area around Eglin Major Test Range and Facility Base on the north coast of the Gulf of Mexico (GOMEX). We determined to see how these facilities, and nearby civilian and military facilities, could support MEB-scale live maneuver and fire-based training. As we considered the facilities, our methodology was to minimize the role of simulations and constructive geography and forces. We then relaxed that constraint and included the potential contributions of simulations and constructive geographies for each range, as required to meet MEB training requirements. In total the analysis produced about 100 range requirements that each area had to support.

Table 1 summarizes the comparison of these three potential training areas.We found that all areas could support some form of MEB training. SW CONUS was the best match with a number of options for building a collection of ranges to support CE, GCE, ACE, and CSSE training. Camp Lejeune and GOMEX would require extensive computer simulation and the use of constructive forces and terrain to support both operational- and tactical-level MEB training.

Leaving the discussion of the analysis of each area to the body of this paper, Camp Lejeune and GOMEX were found to be better suited for tactically focused, battalion-scale, MEB training, where as SW CONUS is suitable for operationally focused, brigade-scale MEB training.

Finally, where simulation and constructive training elements are required, our approach yields a method to define the requirements for the supporting simulations as well as the supporting constructive forces or geography.

Table 1. Comparison of MEB training areas; suitability, problems, and potential remedies

MEB training area	Problems	Potential remedy
SW CONUS[a] San Diego, Camp Pendleton, 29 Palms, Yuma	Limited long-exercise duration multi-Bn maneuver areas at 29 Palms	Extend base boundary west to support additional Bn corridor
	Limited ground maneuver curtails fire support in deep area	Use representative forces in deep area as required
	San Clemente NSFS not integrated into maneuver in rear and close battle areas	Use artillery or VAST to simulate integration of NSFS
	Fires in support of port seizure not possible	Use simulated fires to support port seizure
	2015 scenario requires operations from seabase	Amphibs/CVNs as seabase as required
MidLANT[b] Morehead City, Cherry Point, Camp Lejeune, Ft. Bragg, Ft AP Hill	Limited short-exercise duration Bn maneuver areas at Camp Lejeune	Start with Bn forces near contact
	Limited multi-Bn maneuver areas at Camp Lejeune	Integrate constructive and representative forces via simulation
	Single impact area for all supporting close fires, Bn and fires area not adjacent	Integrate constructive and representative fires via simulation
	Fires in support of port seizure not possible	Use simulated fires to support port seizure
	2015 scenario requires operations from seabase	Amphibs/CVNs as seabase as required
	Offshore Lejeune	Amphibs as seabase
	No mountain terrain	No mountain terrain
GOMEX[c] Pensacola, Eglin MTRFB, Ft Polk, Avon Park	No operational training areas within 200NM of close training area	Staged tactical and support assets at distant bases to simulated operational maneuver and support, Constructive operational environment
	Limited short-exercise duration Bn maneuver areas at Camp Lejeune	Start with Bn forces near contact
	Limited multi-Bn maneuver areas at Camp Lejeune	Integrate constructive and representative forces via simulation
	Single impact area for all supporting close fires, Bn and fires area not adjacent	Integrate constructive and representative fires via simulation
	No NSFS	Use artillery or VAST to simulate integration of NSFS
	Fires in support of port seizure not possible	Use simulated fires to support port seizure
	2015 scenario requires operations from seabase	Amphibs/CVNs as seabase as required
	Offshore Lejeune	Amphibs as seabase
	No mountain terrain	No mountain terrain

a. Green: MEB training supported with real or Co-level representative forces
b. Yellow: MEB training requires constructive tactical forces and/or simulator support
c. Red: MEB training requires constructive operational and tactical forces and/or simulator support

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Introduction

This research memorandum documents our analysis of the Marine Expeditionary Brigade (MEB) training environment. This analysis is the final of the three substantive project tasks. This introduction presents a brief review of the work on the first two project tasks, documented in [1] and [2]. We follow the introduction with our analysis of the physical environment required to train the MEB at the operational and tactical level of war. The memorandum closes with a section discussing the implications of our analysis on the integration of physical and constructive training environments for tactical and operational MEB training.

MAGTF training requirements

The MEB is the Marine Corps mid-sized Marine Air Ground Task Force (MAGTF) warfighting unit [2], fitting between the larger, more operationally focused Marine Expeditionary Force (MEF), and the smaller, tactically focused Marine Expeditionary Unit (MEU). In over-simplified terms, the ground combat power of the MEF is a division, the MEB a reinforced regiment, and the MEU a reinforced battalion. Analysis of historical and anticipated MEB employment [1] shows that the MEB must be ready to function at the tactical and operational levels of warfare—and potentially transition an on-scene battalion-scale tactical Marine force to an operationally focused, regimental-sized, force.

As a MAGTF, integration between the ground, air, and support elements is a critical aspect of training the MEB. The MEB integration responsibilities. Our functional analysis of the MEB focused on. We drew regimental and battalion-level responsibilities from Marine Corps doctrine, including, Marine Corps Warfighting Publications *MAGTF Command and Control, Ground Combat Operations, Aviation Operations, and Operational and Tactical Level Logistics* [2]. Appendices A through D of reference [2] list approximately 530 Command

Element (CE), Ground Command Element (GCE), Aviation Command Element (ACE), and Combat Service Support Element (CSSE) tasks drawn from these Marine Corps doctrinal publications. Many of these tasks, particularly those at the tactical level, trace back to standard Marine Corps Readiness Evaluation System tasks. The appendices organize these tasks, or responsibilities, by MEB participant (e.g., GCE) and sub-element (e.g., Fire Support Coordination Section). Based on the publication, we classified each responsibility as a planning or execution task, as well as cited co-elements in the integration task, for example, CE and ACE, for the GCE FSCS's responsibility to "Coordinate all supporting arms to support the concept of operations." Finally, we listed the maximum applicable level of war for each responsibility, based on analysis of the responsibility and Joint Pub 1-02's definition of operational and tactical levels of war.

These responsibilities form the core of our MEB training environment analysis, and we will return to them following this introduction.

MEB 2015 training requirements

Ultimately, we need to apply the above MAGTF responsibilities to MEB training. The study sponsor asked us to use the MEB 2015 as our MEB baseline. To set the operational context for this MEB, we used a MCCDC Futures Warfighting Division MPF(F) scenario, Operation Certain Passage. This scenario sees the MEB supporting a small scale contingency, responsible for a mix of operational- and tactical-level missions[2].

Our goal in analyzing the Certain Passage scenario was to determine MEB mission-specific training requirements. The scenario included sufficient detail for us to ask and answer the following questions:

- Which MEB elements were used?
- How were the elements used for maneuver, fires, and support?
- What MEB functions or responsibilities were executed?

This analysis resulted in a table for each phase of the operation listing MEB 2015 functional and coordination responsibilities for MEB

elements, including GCE elements, ACE, or CSSE. These tables form appendix F in reference [2].

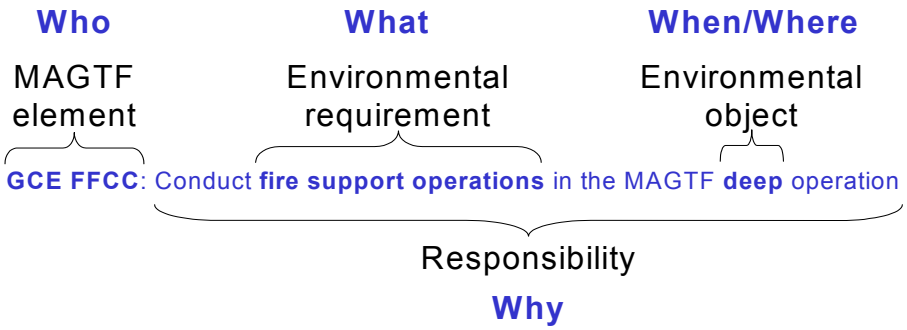
Thus, we used our analysis of Marine Corps MAGTF doctrine and the structure and scenario mission of the future MEB 2015 to develop lists of MEB element function and coordination responsibilities. This structure allowed us to include details of fighting the future MEB as a MAGTF not detailed in the future scenario, and it allowed us to add aspects of anticipated future MAGTF employment to the list of current MAGTF responsibilities. The next sections of this memorandum report how we translated these responsibilities into requirements for the MEB training environment.

Who, what, when, where, and why—MEB responsibilities

The goals of our analysis are to determine the physical characteristics of the MEB training environment, and the resources required to support MEB training. By physical characteristics we mean physical areas or facilities, such as, maneuver areas, airspace, beaches, urban areas, and ports. Analogous training resources include maneuver elements, aircraft, landing craft, armored personnel carriers, and ships. Together these are the *what* and *where* of the training environment. It is easy to develop a huge list of desired "what's and where's," designing a training environment that "has everything." But it is important to understand *who* needs a specific element of the environment and *why* they need that element.

The MEB responsibilities answer the who, what, where, and why of the training environment. For example, from appendix A of [2], we see that one of the GCE Force Fires Coordination Center responsibilities is: *Conduct fire support operations in the MAGTF deep operations.* Figure 1 shows the breakdown for this responsibility. This breakdown tells us that the **GCE FFCC** *(who)* needs a **deep** *(where)* operating area that allows **fire support operations** *(what)* to train the responsibility of **conducting fire support operations in the MAGTF deep operation** *(why.)*

Figure 1. Analysis of MEB element responsibility



We were asked to identify where the MEB can train; essentially, we were asked to answer the "where and what" for the MAGTF training environment. Later sections in this memorandum will show that this method of analysis will also yield, for example, a list of who needs each *what*, and why they need it, allowing MEB trainers to prioritize the need for specific characteristics of a training environment to meet the specific needs of a training program.

The list of MAGTF/MEB responsibilities contains the information to determine the characteristics of the MEB training environment. The rest of this section details the method we used to extract these characteristics from the database in appendices A through D of [2].

The grammatical structure of the guidance yields the analytic connection between the guidance and the training environment. All sentences have a subject, even if implied, and a verb. Guidance statements have a subject, verb, and object; for example, **The Command Element monitors operations.** Here the subject, the **Command Element**, is given the responsibility to **monitor operations,** the verb clause, with **monitor** as the verb and **operations** the verb's object. So, the subject identifies who has the responsibility, and the verb clause names that responsibility, giving why the environment must contain some specific, supporting characteristic. So the environment (physical or constructive) must allow the Command Element to monitor operations.

The database identifies the who and why directly. The list of responsibilities, i.e., why you need the training environment, are sorted by the responsible MAGTF element. Using lexical terms, the MAGTF element is the subject of the guidance sentence, for example, **GCE FFCC** in the guidance sentence in figure 1. The responsibility in the same figure, **conduct fire support in the MAGTF deep operation**, is the verb phrase of the guidance sentence. Who needs the training environment? The CGE FFCC. Why does the GCE FFCC need the training environment? To train conduct of fire support in MAGTF deep operations. The database is just a list of the subjects and verb phrases, or who and why, for all the guidance extracted from the reference material. Fortunately, most military guidance (but not all!) is written in the active voice, making the identification of the subject and verb phrase obvious.

Identifying the what and where/when requires a lexical analysis of the verb phrase, i.e., the responsibility. We took each responsibility and parsed it into verb, verb modifier, and object clause. The first line of table 2 shows the parsing of the responsibility **"control artillery fires near troops."**

Table 2. Parsed MAGTF responsibility

Verb	Adverb clause	Adjective clause	Object
control	near troop areas	aircraft	fires
conduct	in the MAGTF deep operation [area]	fire support	[operations]

The table above presents a typical example of breaking down a responsibility. The adverbial and object clauses tell us about the training environment required to support this responsibility. To actually train or assess the responsibility, the object requires that the training environment must support fires, the adjective requires that it must support aircraft, and the adverb clause requires that it must include troop areas.

The verb also conveys information about the environment, typically indicating if the responsibility requires a real or representative environment. For example, the responsibility **"discuss fires"** does not

require a physical environment; even an abstract, conceptual, representation of the physical environment will support the discussion of fires.

Verbs relating to "planning" are more problematic. Operational planning, and most tactical planning, use representations of the environment, not the environment itself. These representations might be a sophisticated geographical information system, a paper map, or stones and scratches on a impromptu "sand table." But none of the representatives required the physical existence of the represented terrain to support planning. However, the ability to assess the quality of this representation, as well as the effectiveness of the plan on execution, does require a physical environment. Because many of the senior MEB responsibilities address planning, we analyzed the planning responsibility as if the verb "plan" was "execute," but also tracked planning-related environmental requirements separately. In most cases, the verb clause is "plan and execute," leading to the same environmental requirements for conducting planning and executing the plan.

Guidance "shorthand" adds another twist to analyzing the MEB requirements. The second row in the table shows a breakdown of the guidance in figure 1. To understand the implications of this guidance on the training environment, we had to fill in a few grammatical blanks due to using subject matter expert "shorthand," as shown in square brackets in the table entries. Both additions are typical; **"fire support"** is a concept of operations, but the verb **"conduct"** must apply to the operation, not to the concept, so **"fire support"** in this responsibility really means **"fire support operations."** This may seem like hair-splitting, but it is important; a physical training environment is not required to *discuss* the concept of fire support, but a physical, specialized environment is required to *conduct* fire support operations.

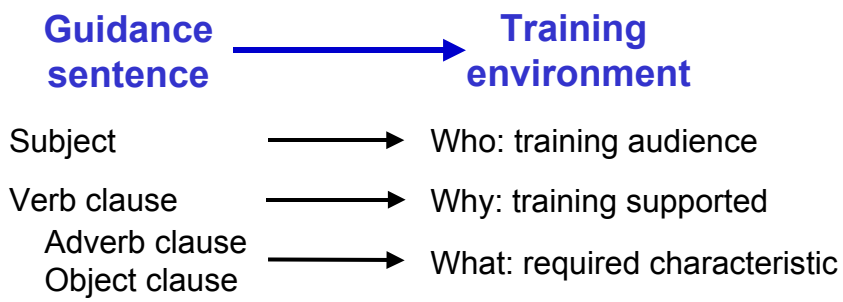
Finally, many of the responsibilities contained multiple verb clauses for the same subject, for example:

> establish reporting requirements, FSCMs (ex restricted fire areas, RFAs), and fire support coordination procedures when existing procedures are inadequate.

This example would break into three separate requirements relating to reporting, fire areas, and procedures.

Figure 2 summarizes the method for extracting information about the training environment from the guidance. While we apply the method to MEB/MAGTF guidance, the method can be applied to any operational guidance, providing a general method to see the implications for the training environment in every guidance statement.

Figure 2. Translation of guidance statements into characteristics of the training environment



Appendix A contains the breakdown of the responsibilities given in appendices A through D of reference [2]. Not all of the 534 responsibility clauses contain information about the required physical training environment; many apply to non-physical objects such as concepts, guidance, or standards. The next section discusses how we identified and consolidated the environment-specific responsibilities.

MEB responsibilities and the physical training environment

The previous section presented an analytic method for connecting each guidance statement into some aspect of a training environment. This analysis showed that some guidance requires a physical training environment, for example, **FAC controls aircraft in company AOR,** requires a physical environment that contains an area of responsibility for company operations, airspace, and aircraft to control. In this

example, the environment contains physical areas, **company AOR,** things, **aircraft,** and people, **FAC**.

Not all guidance requires the existence of a physical training environment. In fact, the objects of some guidance, such as **concepts** in **Command Element develops concepts of operation,** do not exist in any physical environment. Concepts of operation will depend on characteristics of the physical operating or training environment, but, unlike controlling fires, the training audience can develop concepts of operation without a physical training environment. These requirements are important to training; the requirements for a synthetic training environment will encompass these non-physical guidance objects. The remainder of this memorandum is concerned with identifying characteristics of the physical training environment *required* to support MEB training.

The opening guidance example in this section referenced people, places, and things. Analysis of all the physical referent objects in the MAGFT guidance shows that all belong to one of these three categories. Table 3 gives three examples from appendix A that illustrate this categorization. We carried out a similar classification for each guidance phrase in appendix A. We broadened the people category to include command staffs, for example, the ACE staff as shown in the fourth line of table 3. Most of the guidance contained a mix of the three categories, as seen in the guidance **Collect sensor information to enhance ACE deep operations**, one of the few pieces of MAGTF guidance including all three.

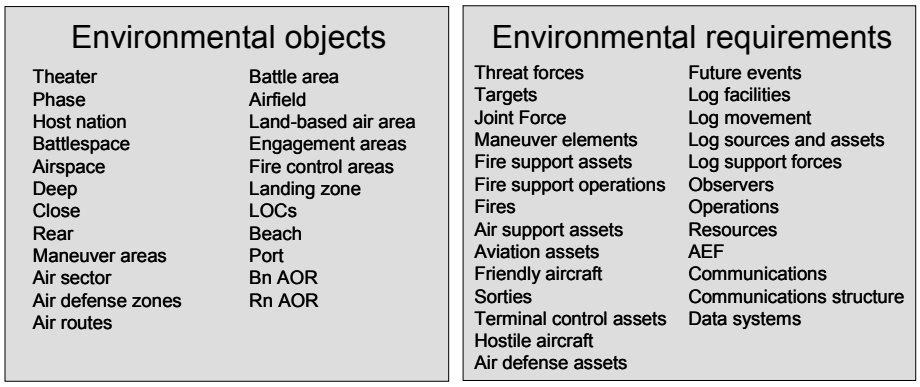
Table 3. Categorization of guidance

Verb	Adverb clause	Adjective clause	Object	People	Places	Things
Advise		GCE	commander	X		
Shape		deep	battlespace		X	
Direct		friendly	aircraft			X
Collect	to enhance ACE deep operations	sensor	information	X	X	X

While people, unlike concepts, are real physical objects, they don't have to exist in the physical training environment. These people and staffs can be part of the physical or synthetic environments. For our analysis, we focused on places and things that the physical training environment must contain. This choice fit our project needs. However, the analytic method can still help determine the training environment for other assumptions. For example, trainers who want to identify what people and staffs are required to support training the MEB in either a physical or synthetic training environment can easily extract this "people" information from an electronic version of appendix A.

We identified the set of guidance referring to time, place, or areas in the real environment. As in figure 1, we use the term environmental objects and requirements to label "areas and things" extracted from the MAGTF guidance. Figure 3 lists these environmental objects and requirements. Most of the environmental requirements appear in multiple guidance statements. For example, fires are required to support 16 guidance statements, and logistics support forces in 13 statements. Appendix B lists the guidance statements citing each environmental requirement.

Figure 3. Areas and things named in MAGTF guidance



Most of the objects and requirements in figure 3 are commonly used terms, e.g., the environmental object **maneuver area**, or environmental requirement **targets**, but others need further explanation. Many of the guidance phrases referenced things, e.g. fires, but did not identify where these were in the battlespace in either the guidance, or inferentially, in the named, responsible staff section. The context usually implied that they could occur anywhere in the battlespace. For those responsibilities identified as operational, that is, taking place multiple battles, over larger space and time, we used the "place" label "Theater." For tactical responsibilities, i.e. those that apply to a single battle, we used the label "Battle area."

The physical training environment that supports the set of guidance statements consists of pairs of environmental objects and requirements. A total of 85 pairs describe the physical MAGTF training environment for the guidance set in appendix A. Appendix C lists these pairs and the subset of guidance statements citing the pair. This list of environmental objects and requirements is the minimum set of places and things that must be located at each place for the training environment to support MAGTF training. Table 4 contains a set of examples of the derived physical training environment, listing areas the environment must contain, what needs to be present in these areas to support MAGTF training, and what training requirements the environment supports.

Table 4. Examples of derived MAGTF training environment

Environmental object	Environmental requirement	Supported training action
Theater AOR	Threat forces	Assess shaping (GCE) neutralize air threats (ACE)
Theater AOR	Fire control areas	Determine Fire Support Coordination Measures (CE) Establish and maintain FSCMs (GCE)
Close area	Fire support operations	Plan, coordinate and conduct fire support (GCE)
Engagement areas	Fires	Coordinate specialized munitions delivery (GCE) Control artillery and NSFS missions (GCE)
Port	Log facilities	Plan embarkation points location and time (CSSE)

What about the MEB training environment? Appendix F of [2] lists the MEB functions associated with all the phases of the 2015 Operation Certain Passage MEB scenario. We applied the same analytic method to these functions to identify the required MEB training environment. The environment defined in appendix C includes these MEB functions, denoted by (2015) after the appropriate guidance function. The 2015 scenario MEB functions are mostly identical to, though less numerous than, the MAGTF functions. Table 5 lists examples of MEB 2015 unique environmental objects and requirements.The 2015 scenario added 10 object-requirement pairs to the MAGTF list, including requirements for a seabase, urban area, mountainous area, and seizing and securing various areas and facilities.

Table 5. Examples of derived MEB unique training environment

Environmental object	Environmental requirement	Supported training action
Sea area	Seabase	Conduct at-sea arrival and assembly (2015 CE) Support maneuver elements from seabase (2015 CSSE)
Port	Maneuver elements	Seize and secure port (2015 GCE)
Urban area	Maneuver elements	Conduct urban assault (2015 GCE)

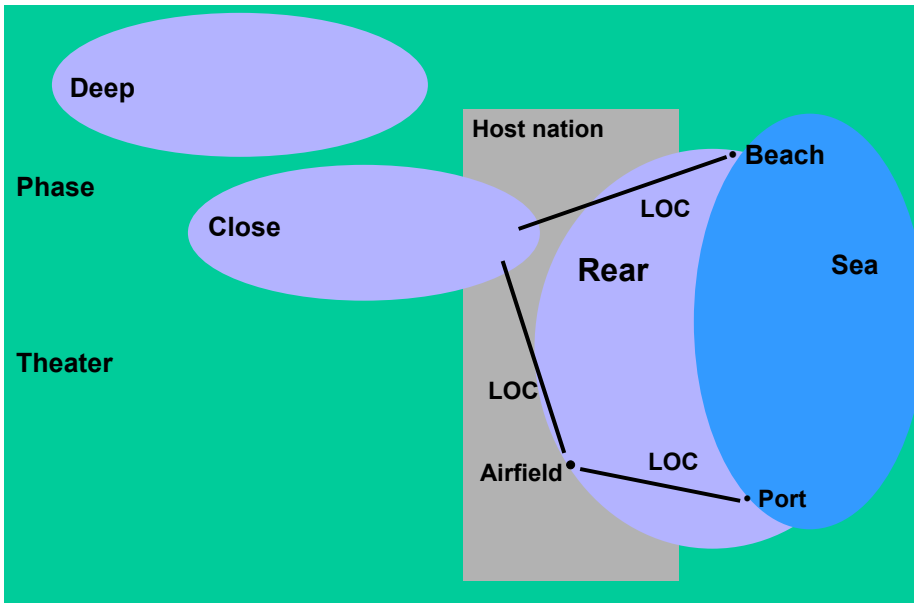
The set of environmental objects and requirements, along with the training actions each supports, defines the elements the physical MEB training environment must contain, and the reasons for each element's inclusion. The next section identifies specific places in the U.S. that would support the training environment, however it is worth illustrating the abstract physical training environment.

Notional operational and tactical MEB training areas

For clarity, we first illustrate the operational-level training environment, followed by the tactical. By operational, we mean those tasks that concern a sequence of battles spread over large spaces and times that support strategic objectives. Tactical pertains to individual battles that support combat objectives [2]. The MEB will not always function at the operational level, but the operational-level requirements place greater space and time demands on the training environment.

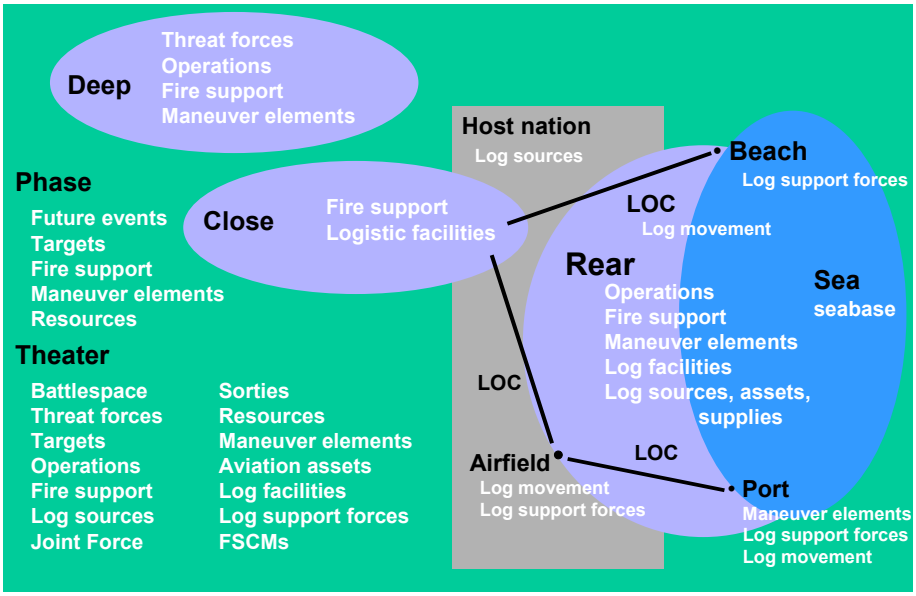
Figure 4 shows the operational-level environmental objects. The figure illustrates notional spatial relationships. The general guidance does not cite distances or even geographic relationships, rather these are set by scenarios and systems limitations.

Figure 4. Notional map of operational-level environmental objects



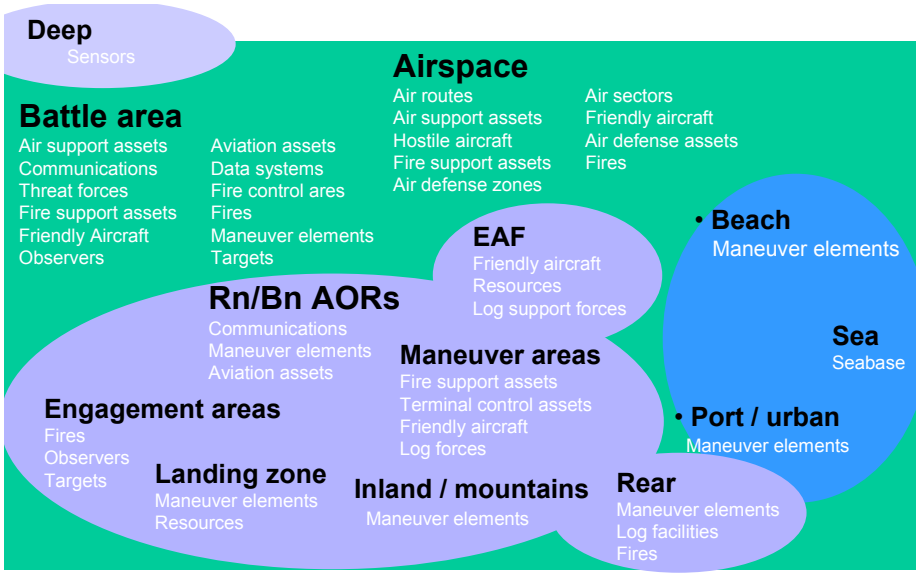
We can add the environmental requirements, to the map that is, what objects or operations each area must include to support each guidance statement. Figure 5 shows these environmental requirements. The reader can probably think of many more things to include in the MEB training environment—keep in mind that these are the places in things required to support the MAGTF reference guidance and the MEB 2015 scenario.

Figure 5. Notional operational-level environmental requirements



The notional representation of the MEB tactical training environment looks similar to the operational-level depicted in figure 5, but focused in on the area of tactical operations, largely the regimental and battalion areas. Figure 6 shows these areas and supporting environmental requirements. With the exception of the costal and sea areas, this picture appears to represent a regimental scale training area. It still must support multiple, simultaneous-battalion-scaled attacks, but a large-size maneuver range can accommodate many of the areas and requirements shown. Nevertheless, these notional representations are not specific enough to assess whether a particular training area will support MEB operational and tactical training. The next section examines how well potential MEB training areas in the continental United States (CONUS) can support these training requirements.

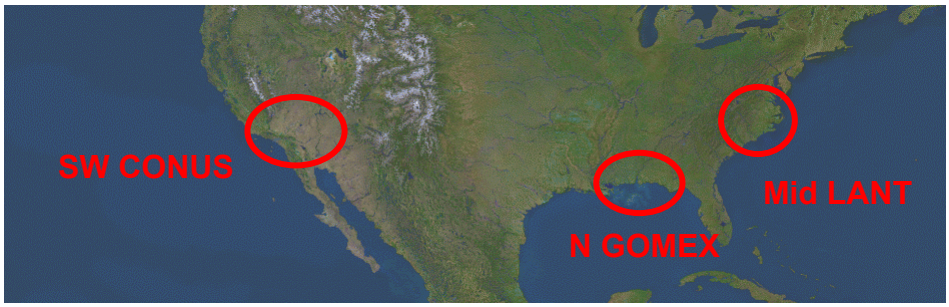
Figure 6. Notional tactical-level MEB training area



Potential MEB training areas

The list of 100 odd pairs of environmental objects and requirements was the starting point for the analysis of potential MEB training areas. For each of the three major training areas considered, we went through the list of environmental pairs and tried to find a specific facility that included the environmental object, allowed the inclusion of the environmental requirement, *and* supported the guidance statements citing the pair. We started with the operational level to ensure that the major elements of the physical training environment supported the training requirements. Figure 7 shows the candidate areas.

Figure 7. Candidate MEB training areas



Operational-level training areas

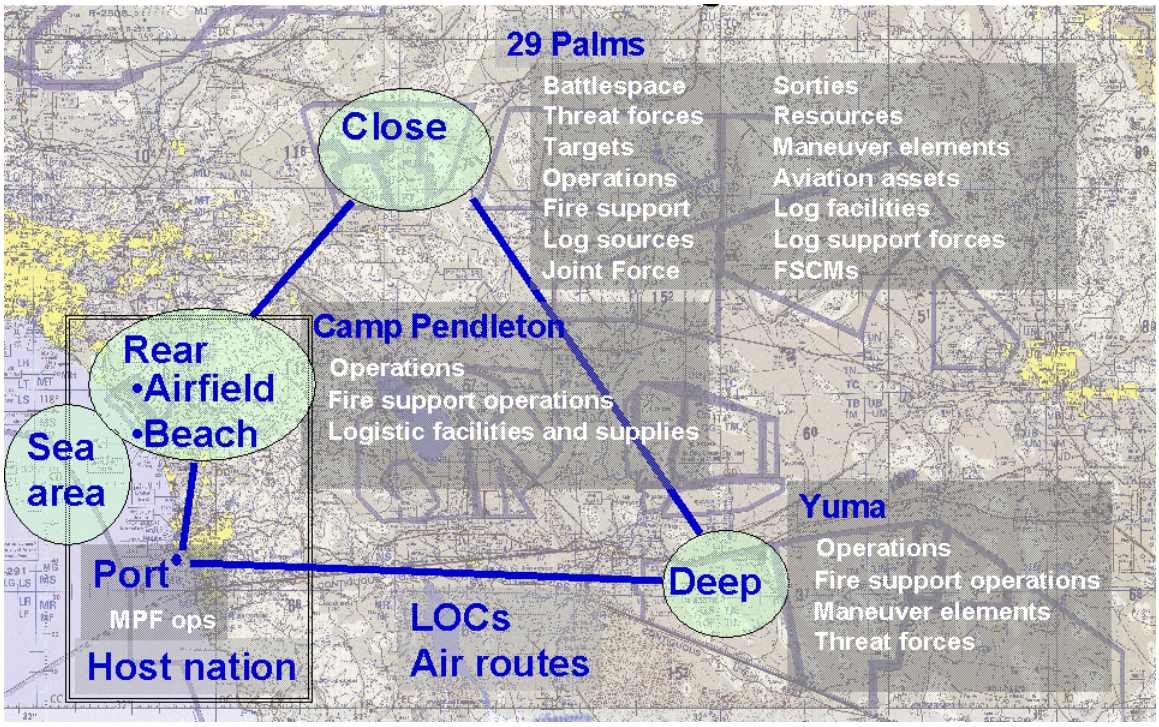
Table 6 lists three examples that match training area capabilities to requirements. The first line of the table shows that all three candidate training areas, southwest CONUS, northern Gulf of Mexico, and middle Atlantic coast, can support the requirement that the GCE plan, coordinate, and conduct fire support operations. These are of course not the only places in each candidate MEB training AOR that can meet these requirements, but reflect the one option for satisfying the entire set of operational requirements. Figure 8 shows one potential use of SW CONUS training facilities to meet the MEB's operational training requirements. In fact, the analysis shows that SW CONUS can meet the MEB operational requirements in a number of ways—it is a flexible solution. Even so, SW CONUS cannot meet all the requirements. For example, San Diego cannot meet the requirement that the Port area to support MPF and fire support operations likely the fire support operations in vicinity of the port will be constructive, with a constructive allocation of fire support assets. Our goal was to meet the training requirements using as few constructive range elements as possible.

Table 6. Examples of suitable candidate MEB operational training areas

Environmental object	Environmental requirements	Guidance requirement	SW CONUS[a]	Northern Gulf of Mexico	Mid-LANT[b]
Close area	Fire support ops	plan, coordinate and conduct fire support	29 Palms	Eglin MTRFB[c] East	Camp Lejeune
Rear	Operations	monitor rear ops	Camp Pendleton	Eglin MTRFB	Cherry Point
Port	Log facilities	Plan embarkation points and times	San Diego SPOE[d]	Port of Pensacola	Morehead City SPOE

a. South West Continental United States.
b. Middle Atlantic coast.
c. Major Test Range Facilities Base.
d. Sea Port of Embarkation.

Figure 8. Potential arrangement of SW CONUS facilities to meet MEB operational training requirements



MEB tactical training constraints

We used the same process to find suitable environments to meet the MEB tactical training requirements. We added the requirement that the tactical and operational solutions be consistent—both supporting the same notional scenario. In some cases, this constraint led to choosing between only one of two possible, acceptable, operational configurations. Appendix D lists the local training areas associated with each environmental object and requirement in each of the three major MEB training areas considered. Appendix D includes the training requirement supported by each local training are.

Determining which areas can support tactical MEB training requires identification of the training audience and the tactical functions that the training environment must support. At the tactical level these functions include movement, maneuver, and fires. The operational guidance discussed above includes this information. Table 7 lists the guidance documents we used to extract MEB MAGTF functions.

Table 7. Guidance documents used to extract MEB MAGTF guidance

Publication	Title
MCWP 3-1	*Ground Combat Operations*
MCWP 3-2	*Aviation Operations*
MCWP 3-40.1	*MAGTF Command and Control*
MCWP 4-1	*Logistics Operations*
MCWP 4-11.3	*Transportation Operations*
MCWP 4-12	*Operational-Level Logistics*

The guidance extracted from the sources in table 7 specifies responsibilities for selected commands, agencies, staffs, and individuals. The guidance also cites seniors, subordinates, and peers with whom these MAGTF elements must work to execute the assigned responsibilities. In terms of our lexical analysis, the MAGTF elements to whom the guidance assigns responsibilities are the subjects of the guidance clauses; the elements with whom these elements work are found in the verb phrases. The distinction is important—members of the primary training audience are the subjects of the responsibility

statements; those elements in the verb phrase are required to support training. They may also receive training, but if so, with respect to training the responsibilities in the guidance, they are a secondary training audience. In whatever training environment the primary training audience must participate, the supporting or secondary audience can be constructive or simulated, as long as the simulation supports training the primary audience on the specified responsibility. Appendix E lists the primary MAGTF training audience and supporting training elements. Table 8 lists examples of supported and supporting MAGTF training elements.

Table 8. Examples of primary supported training audience and associated supporting training element

Supported	Action	Supporting
Bn FSCC	coordinate motar support with	Company
ACE	coordinate with	Joint air control agencies
ACE DASC	control	Aircraft
FSSG port operations group	prepare for arrival	MPSRON

The MEB training environment must support the entire primary training audience listed in table 18. The table includes the lowest levels of the MAGTF command structure for the ACE, GCE, and CSSE. For the ACE the lowest level elements are components of the TAOC and DASC, specifically the SAAWC, ASE, FAC, TAC, ASC, and HST. For the GCE the lowest level elements are components of the Bn FSCC, including weapons liaisons. The lowest levels of the CSSE include control groups for the port, assembly areas, and airfields.

Elements supporting primary MAGTF as cited in table 7 guidance span the range from joint task force elements to firing units and aircrew. At a minimum, a MEB MAGTF physical training environment must allow these supporting elements to function in a realistic manner. Realism in supporting, moving, and fighting these elements forces the primary MEB training audience to plan, allocate resources, assess warfare progress under realistic constraints. Additionally, providing realistic support gives these units an opportunity to satisfy internal unit training requirements.

Identification of the lowest tactical level of the *supporting* elements defines the level of detail MEB training exercises and training environments must support. Table 19 includes the lowest level for the GCE, ACE, and CSSE. For the GCE, this is the company level, specifically, maneuver elements, FIST, and firing units. For the ACE, the guidance requires support from squadrons, aircrew employing fires for FAC control, and supporting air movement. For the CSSE, CSSDs are required to provide direct company and battalion support within the context of the MEB exercise.

Thus, the training environment must support company-level maneuver, indirect, and air fires. While the details of the company and below maneuver elements are not specified, the elements required to support MEB fires training are: FIST control of air, mortar, artillery, and naval fires for each company in the MEB's battalions. In terms of CAX events, this implies a FISTEX-level exercise for a sequence of integrated multi-battalion battles. For the MEB responsibilities analyzed here, unlike fires, representative elements can support tactical maneuver at the company level and below, as long as the represented company maneuvers in a manner consistent with appropriate unit and terrain constraints. Fires must be supported at the forward observer, fire controller, and firing unit-level

Providing a training environment that supports employment of the tactical elements discussed above constrains the number of training areas capable of supporting MEB MAGTF training. The following section details the implication of these constraints.

Tactical training support areas

The above section on MEB tactical training constraints showed that the tactical environment must support integrated multibattalion-level maneuver and fires. This severely constrains the locations that can support MEB tactical training. Before analyzing the compromises required to find any place to train the MEB, we set the scale for the required environment independent of a specific training area.

Reference [2] analyzed the size required to support company (Co), battalion (Bn), and brigade (Bde) training. This analysis drew together sometimes conflicting intelligence, operational, and train-

ing guidance for Marine Corps and U.S. Army units. This analysis showed that the U.S. Army training Circular TC 25-1, *Training Land*, gives reasonable estimates for the maximum aerial size required to support Bde and below training. The training circular includes estimates for both contiguous and non-contiguous operations and training. While TC 25-1 does not detail how the size of each training area was derived, analysis of the operational guidance allowed us to deduce the elements of intelligence, movement, maneuver, and fires Army analysts used to set the scale of training areas.

We are primarily interested in multiple-battalion scale mechanized infantry operations. FM 34-130, *Intelligence Preparation of the Battlefield*, gives the frontal dimensions to the front footprint for a mechanized Bn with two companies up and one back (defense or offense) to be approximately 3 km. Depth of this Bn during movement to contact is approximately 2-3 km, so a typical Bn has a 3 X 3 km footprint. Likewise, a Co footprint is about 1 km square.

Working backwards from TC 25-1, Bn and Co training areas of operations (AO) reveal the rule of thumb of about three times a unit's frontal area for the width of a unit's tactical training area. This width allows for flanking to either side of the training unit following movement to contact on the offensive, defense against threat flanking maneuvers, and execution of counterattacks for defensive training.

The depth of the training area depends on a number of factors, including the size of the unit, duration of the training exercise, initial tactical condition (in contact vs. movement to contact), and effective speed of the unit over the terrain. Movement rates and exercise duration are the principal drivers for the required depth. FM 34-130 includes movement rates for mechanized and dismounted units. Appendix F copies FM 34-130 figure B-41, brigade and below rates of advance. For example, Mechanized units, Bde and below with a 3:1 force advantage, advance at about 20 km per 24 hours against prepared defenses on restricted terrain. Advance rates for the same threat employing a hasty defense is about 30 km in 24 hours.

Taken together the above planning guidance yields an area about 9X18 km for a 12 hour Bn movement to contact scenario. This agrees

well with TC 25-1's appendix A which estimates mechanized Bn training area requirements of 8X17 km for offensive operations.

The training area is sensitive to the duration of the training and level of threat, for example, the area in the example above expands to a 9X70 km area required to support 24 hours of Bn-level training on restricted terrain against a hasty threat defense, inclusive of CSSE support. TC 25-1 appendix C discusses the increase in range requirements for "free-flowing" scenarios without breaks between movement to contact, offensive, defensive, and retrograde training. In this case the Bn's box increases in size to 16X40 km. For non-contiguous operations TC 25-1 expands these training corridors to radii of action—citing an area of about 60 km diameter to support training a Bde-scale unit. As the training circular points out, the training areas resulting from these calculations exceed the size of any U.S. training area for division and above training. Even regimental training exceeding 24-hours duration taxes most Army and Marine training areas.

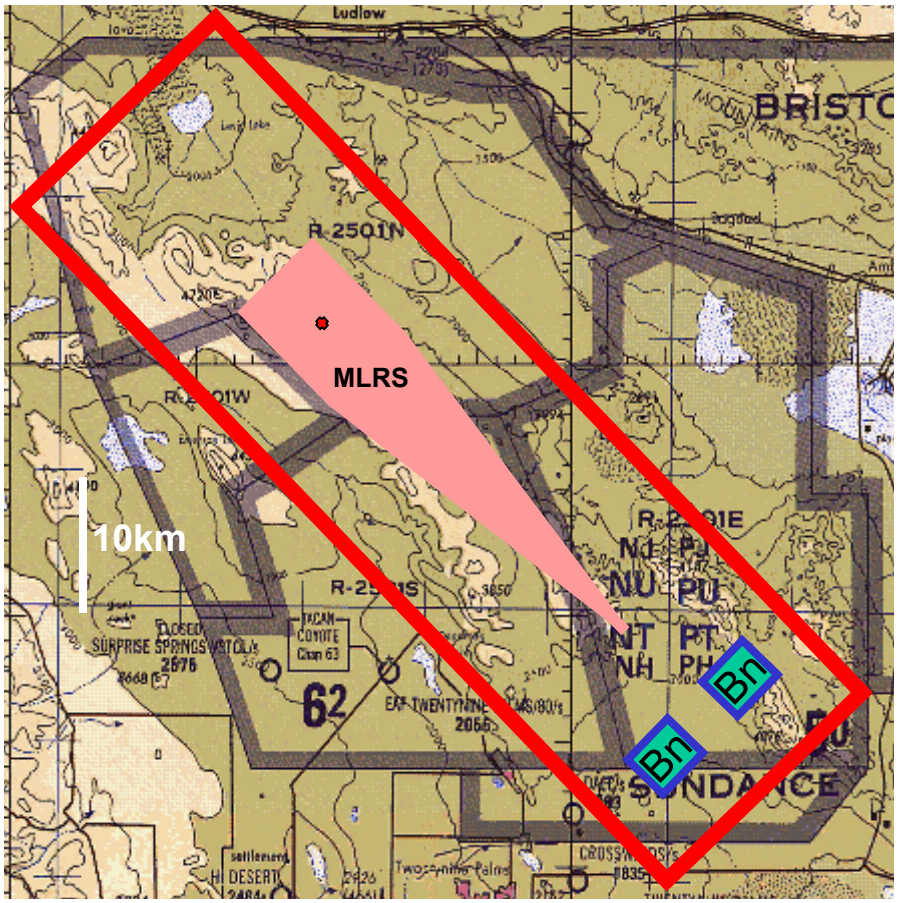
As a consequence of the large training areas required to support MEB tactical and operational training, our analysis included the potential of distributed training. This is consistent with the current U.S. Army approach, as discussed in TC 25-1. Army trainers argue that distributed training also better supports training for distributed operations, which they see as a significant feature of future conflicts.

Examples of tactical maneuver training areas

Superimposing these training area requirements on candidate MEB tactical training ranges gives some insight into the possibilities and problems with Bn-scale maneuver training. However, it is important to heed the caveat found in every operational and training guidance document—actual use of the physical terrain for operations or training depends on extensive mission, enemy, troops, terrain/weather - time (METT-T) analysis of the situation and terrain in question. Terrain that looks "flat" on a map may be impassable for wheeled vehicles. The following graphical comparisons are intended to illustrate the scale of training areas required to support tactical training at company, battalion, and brigade levels.

The problems of finding Marine Corps training areas that can support multiple-battalion training can be seen by laying the Bn size training areas discussed in the last section on a small-scale map of Marine Corps Base Twentynine Palms. Figure 9 shows the area recommended to train two Bns. The figure also shows the surface danger zone for a HIMARS launched Multiple Launch Rocket System (MLRS) M26 rocket with a 32-km range to target. The figure illustrates the large areas required for Bn maneuver training.

Figure 9. Scale comparison of 2 battalion training area, M26 SDZ, and MCB Twentynine Palms



The actual usable maneuver space at Twentynine Palms is considerably smaller than the base outline on figure 9 indicates. To illustrate this, figure 10 shows company and battalion size footprint superimposed on one of the Twentynine Palms training areas, the Delta Corridor. Based on map topology, not micro-terrain analysis, the figure shows that the corridor is well sized for Co maneuver to contact or offensive operations. Most of the corridor is about three Co in width, and would support a 10-hour exercise against a threat Co. The figure also shows that while battalions can fit in the corridor, the ridges to either side constrain them to linear movement and maneuver.This rough map analysis would classify the Delta Corridor as a Co-size maneuver training area, or a constrained Bn training area.

Figure 10. Twentynine Palms "Delta Corridor" with Co and Bn size footprints

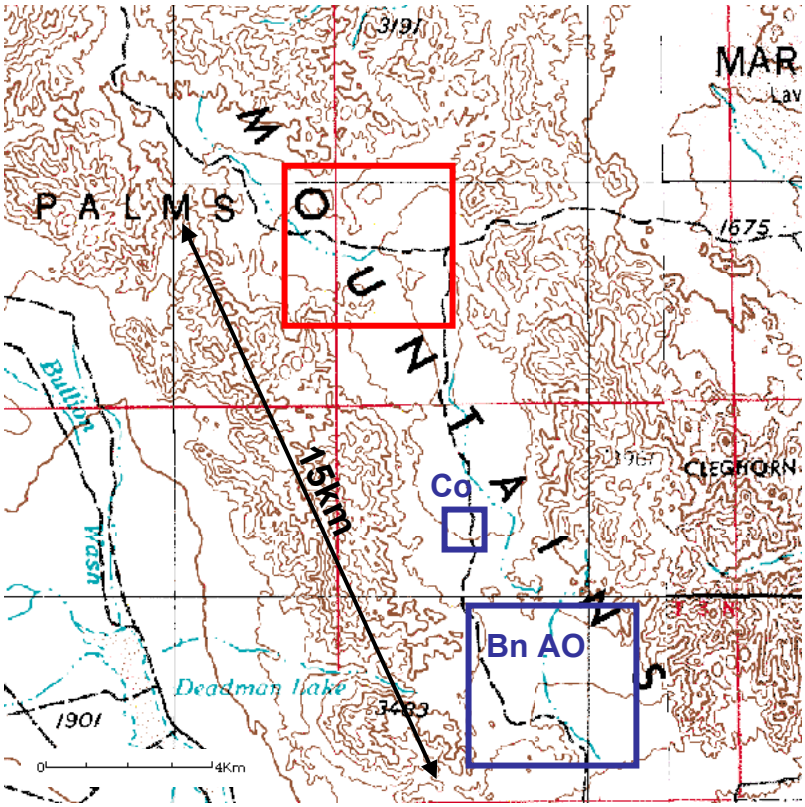
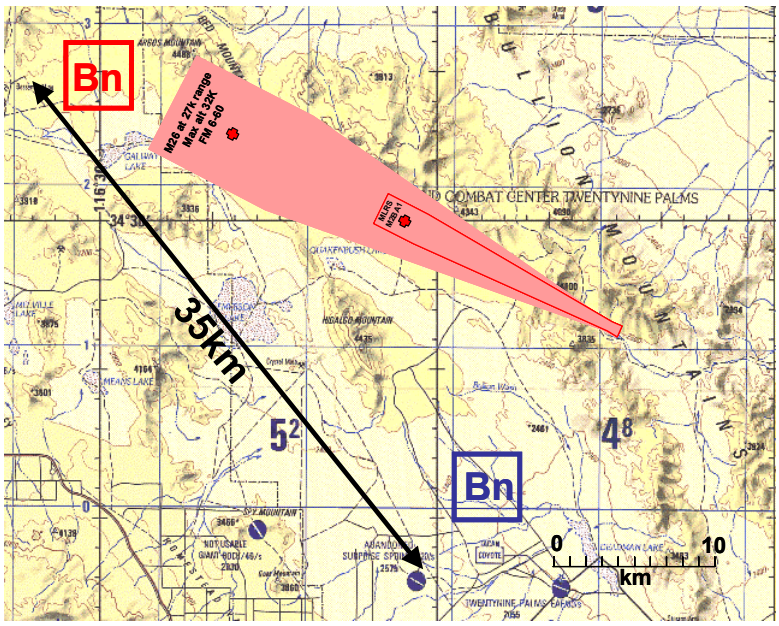


Figure 11 superimposes Bn size on Twentynine Palms' western training areas. The Bns as shown occupy about a 3X4 km area. If the lightest yellow area in the figure was all maneuverable terrain, this corridor is large enough for single Bn maneuver training for a single 10-12 hour event. However, much of even the flat terrain is no-go for wheeled vehicles. Combined, the micro- and mountainous terrain constrain this maneuver area, potentially forcing the use of representative units on roads and slow-go terrain.

Figure 11. Use of Twentynine Palms western ranges to support Bn training



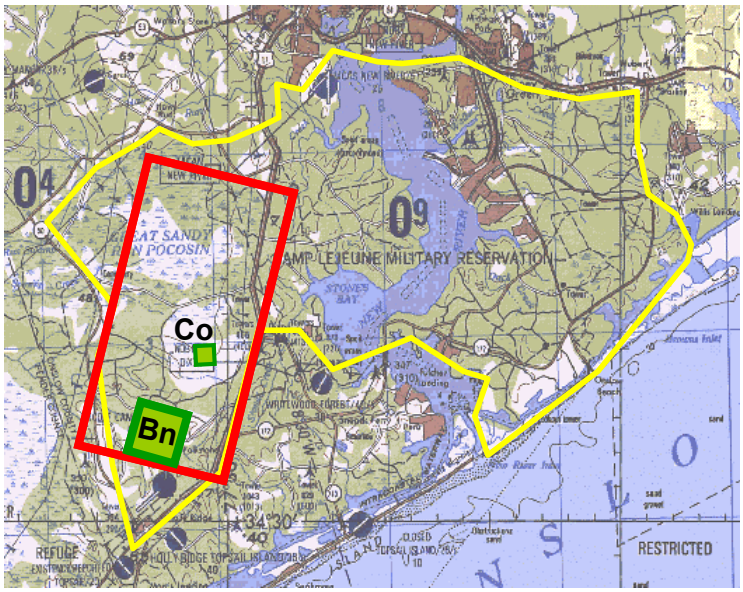
Twentynine Palms includes one other Bn scale corridor, and one potential new corridor. The existing corridor runs also on the northern edge of the base. Again, much of the terrain is not accessible to wheeled vehicles, and some of the micro-terrain is difficult for tracked vehicles. The development of a third, 30-km long, Bn scale corridor along the western edge of the base is possible, but requires acquisition of a western buffer to support use of live fire.

The figure also shows the SDZ for HIMARS-launched tactical and training MLRS rounds. These SDZs easily fit within the base boundaries; however, the M26's apogee do place significant constraints on the range airspace.

Together, these examples show that Twentynine Palms can support multiple Bn maneuver training. However, much of the maneuver, and therefor tactical decision training, is constrained by micro-terrain and mountain ridges. Each Bn would fight along relatively narrow, independent corridors. Both mountainous terrain, and potentially MLRS exlusion airspace would separate the two current, and potentially three, 10X30 km Bn corridors.

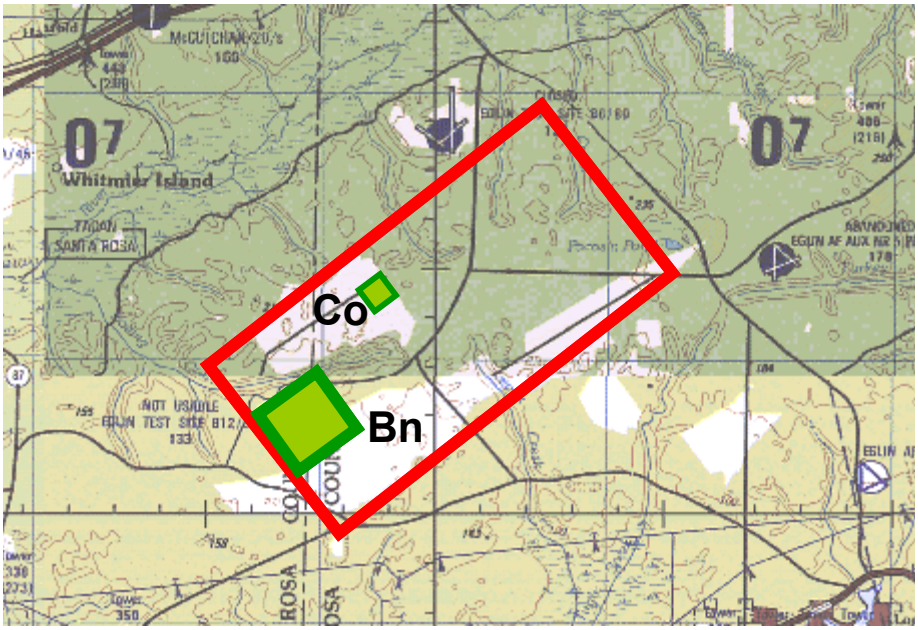
MidLant and GOMEX MEB face great challenges supporting tactical, Bn-level, training.Figure 12 illustrates these challenges. While the Bn offensive tactical maneuver training area roughly fits within the Greater Sandy Run training area, much of the terrain within the red box in the figure is no-go, swamp, terrain. Additionally, SDZs at the end of the maneuver area would extend outside the base boundaries. Finally, unlike Twentynine Palms, Lejeune's indirect fire impact area, G-10 is located on part of the base where maneuver area is much smaller than the notional 9X18 km Bn maneuver box. This does not mean that Camp Lejeune cannot support Bn training - in the past it has been used to support regimental-scale maneuver training. However the maneuver training will be constrained, and likely not supported by live-fire.

Figure 12. Comparison of scale of Camp Lejeune, 9X18 Bn training area, and Bn and Co areas of operation.



Similar problems hold for GOMEX tactic maneuver training. Figure 13 shows a 9X18 Bn maneuver area superimposed on Eglin MRTFB's maneuver areas. While the Bn area fits easily with the range boundaries, range regulations restricts movement outside the white areas in the figure restricted to roads.

Figure 13. Comparison of scale of Eglin MTRFB, 9X18 Bn training area, and Bn and Co areas of operation



Thus, the figure shows that the current Eglin MTRFB maneuver areas are more appropriate for Co maneuver training. Significant increases to current MTRFB ranges would be required to make Eglin suitable for integrated single or multiple Bn training. These restrictions will likely result in MEB training using representative units moving on existing range roads, with simulated direct fires, and potentially displaced live indirect fires against representative targets in existing MTRFB impact areas. Both this form of movement/maneuver and fires require significant effort to integrate the training into a effective scenario - likely through simulator support and inclusion of constructive computer-generated forces.

Comparisons of candidate MEB training areas

Table 9 shows examples of the detailed environmental requirements and candidate ways to meet them using elements of the three MEB training areas. The third line in table 9 shows some of the problems with East Coast facilities at the MEB tactical level. The requirement

for multiple coordinated battalion-scale assaults is difficult to satisfy on the East Coast; neither Eglin MTRFB nor Camp Lejeune can support these operations. Ft. Bragg is a non-marine candidate for this, but no candidate exists for northern Gulf of Mexico. Likely coordinated MEB battalion assaults will be constructive on the East Coast. Thus, it will be difficult for MEB trainers to assess the capability of the MEB CE and GCE to conduct these coordinated operations with real units.

Table 9. Suitability of candidate MEB tactical training areas examples

Environmental object	Environmental requirements	Guidance requirement	SW CONUS[a]	Northern Gulf of Mexico	Mid-LANT[b]
Beach	Maneuver elements	Conduct amphibious assaults at night	Camp Pendleton	Eglin MTFFB	Camp Lejeune
Maneuver area	Terminal control assets	Manage terminal control assets	Camp Pendleton, 29 Palms, Yuma	Eglin MTRFB East	Camp Lejeune
Bde AOR[c]	Maneuver elements	Conduct multiple Bn simultaneous assaults on single target	29 Palms	N/A	Ft AP Hill

a. South West Continental United States
b. Middle Atlantic coast
c. Battalion Area of Responsibility within 200NM of close-area

Table 10 compares the ability of SW CONUS, Mid-LANT, and N GOMEX areas to support MEB training. The figure shows the training environment area for each required environmental object. Note that the Mid-LANT and GOMEX options do not cover some of the required environmental objects. For example, neither Mid-LANT nor Eglin MTRFB support the requirement for mountainous assault. More significantly, GOMEX cannot support the operational-level requirement for deep operations within 200NM of the close area.

Table 10. Comparison of MEB training options

Environment object	Max warfare level	SW CONUS	Mid-LANT	GOMEX
Phase	Operational	Time: At least two sequential Bn-scale battles for operational, one for tactical	Time: At least two sequential Bn-scale battles for operational, one for tactical	Time: At least two sequential Bn-scale battles for operational, one for tactical
Theater	Operational	Pendleton-North Island-29 Palms-Yuma	Savannah GA-Eastern, NC, Southeastern VA	Greater Eglin area
Host nation	Operational	San Diego County, CA	Savannah GA and Beaufort County SC	Pensacola, FL
Sea area	Operational and Tactical	SOCAL OPAREA	VACAPES OPAREA	GOMEX OPAREA
Deep	Operational and Tactical	Yuma	Ft AP Hill	Ft Polk U.S. Army JRTC
Close	Operational	29 Palms	Camp Lejeune	Eglin MTRFB
Rear	Operational and Tactical	Camp Pendleton	MCAS Beaufort	NAS Pensacola
Port	Operational and Tactical	San Diego (SPOE)	Morehead City, NC (SPOE) or Savannah GA	Port of Pensacola
Beach	Operational and Tactical	Camp Pendleton	Camp Lejeune	Eglin MTRFB
Airfield	Operational	Camp Pendleton	MCAS Beaufort	NAS Pensacola
LOCs	Operational	Pendleton-North Island-29 Palms-Yuma	Savannah- MCAS Beaufort - Lejeune	Pensacola-Eglin-Polk or Avon Park
Battle area	Tactical	Pendleton, 29 Palms	Camp Lejeune - AP Hill	Eglin MTRFB, Ft Polk or Avon Park
Maneuver areas	Tactical	Pendleton, 29 Palms	Camp Lejeune - AP Hill	Eglin MTRFB, Ft Polk or Avon Park
Engagement areas	Tactical	Pendleton, 29 Palms, San Clemente	Camp Lejeune-G-10, AP Hill	Eglin MTRFB, Ft Polk or Avon Park
Landing zone	Tactical	Pendleton, 29 Palms	Camp Lejeune - AP Hill	Eglin MTRFB, Ft Polk or Avon Park
Airfield	Tactical	29 Palms	MCAS Beaufort	Eglin MTRFB

Table 10. Comparison of MEB training options (continued)

Environment object	Max warfare level	SW CONUS	Mid-LANT	GOMEX
Mountainous area	Tactical	Camp Pendleton, 29 Palms	None	None
Inland area	Tactical	29 Palms	AP Hill	Ft Polk
Urban	Tactical	Yuma (aviation), Pendleton (ground)	Camp Lejeune	Eglin MTRFB, Ft Polk or Avon Park
Bde AOR	Tactical	Pendleton, 29 Palms	AP Hill	Eglin MTRFB, Ft Polk or Avon Park
Bn AOR	Tactical	Pendleton, 29 Palms	Camp Lejeune, Ft Pickett, Ft AP Hill	Eglin MTRFB
Forward air supply area	Tactical	29 Palms	MCALF Bogue	Eglin MTRFB
Airspace	Tactical	Pendleton, 29 Palms, Yuma	R3506, Cherry Point TACTS	R29xx, W151
Air defense zones	Tactical	Yuma R2301	Lejeune R3506, Ft Bragg R5311, plus integrated special use air-space	W151
Air routes	Tactical	Pendleton-29 Palms	MCAS Beaufort-Lejeune-AP Hill	Pensacola-Eglin-Ft Polk or Avon Park

Shared problems supporting MEB training requirements

There are problems with the details of some of the specific training environments listed in table 10. All areas have problems with:

- Ports
- Seabase
- Fires and fire support coordination.

The MEB requirements call for execution of fire support at the port (MAGTF guidance) and port seizure (MEB 2015 scenario). Other port logistics requirements need the use of actual port facilities to support MPF and logistics operations. MEB trainers will likely have to employ constructive fire support and port seizure.

Seabase issues are not surprising as the current operating environment lacks a seabase. But it is worth listing the 2015 MEB seabase functions to see future seabase training requirements:

- Operate from the seabase (CE, GCE, ACE, CSSE)
- Direct MEB operations from the seabase (CE)
- Coordinate with seabased support elements (CE)
- Coordinate with seabase and seabased battalions (GCE)
- Support maneuver elements from the seabase (ACE)
- Conduct at-sea arrival and assembly (CSSE)
- Coordinate with seabase and maneuver elements ashore (CSSE).

Problems with fire support coordination reflect the individual character of the major MEB training areas, unlike port and seabase problems. For SW CONUS the issue involves integrating NSFS into the GCE's scheme of maneuver. While San Clement can support NSFS fires, additional training instrumentation is required to integrate these real fires into maneuver-fire training. Eglin faces a similar problem. Here integration of sea-impact fires into the maneuver-fire training requires existing instrumentation (Virtual At-Sea Trainer) and

changes to current fires training procedures [3]. Camp Lejeune has only one air-artillery-NSFS impact area, making integrated fire support with independent battalion tactical maneuver elements difficult.

Non-NSFS fire support coordination is an issue for other reasons at Eglin and Camp Lejeune. At Eglin, the direct-fire maneuver ranges are located over 10 n.mi from the indirect-fires impact ranges [3]. Pendleton, 29 Palms, and Camp Lejeune company maneuver and fire ranges are contiguous, making it possible for visual observers to assess the timing and accuracy of the fires and translate the tactical effects of the fires into the progress of tactical maneuver execution.

Fixing this problem requires either establishing maneuver ranges near Eglin indirect-fire impact ranges, or developing training instrumentation to translate the fire's tactical effects into the maneuver training. New Eglin maneuver areas require the Marines environmental approvals and invest in range construction. Because no instrumentation exists to translate the fires into the maneuver area, funding would be required to develop a new instrumentation.

Camp Lejeune also has a similar problem integrating indirect fires and battalion-level maneuver. Only the Company Battle Course is adjacent to Camp Lejeune's G-10 impact area. Battalion-level fire-maneuver training would require linking other company-level maneuver areas on the base to the fire effects achieved in G-10. Building company-level maneuver ranges near G-10 requires major changes to the base infrastructure, as well as environmental permissions. Like Eglin, instrumentation linking fires-maneuver training is a potential solution. Unlike Eglin, it is unlikely that the base can support multiple-battalion maneuver training.

The bottom line is that, in the absence of significant range development, East Coast battalion and regimental fire-maneuver training requires instrumentation that integrates non-adjacent fire and maneuver ranges. Like the use of instrumentation to integrate sea-impact NSFS fires into company-level combined arms training, instrumentation-based fire-maneuver training requires a change in fundamental Marine Corps training values. Marines will have to assess whether this change in values is worth the gain of achieving some level of East Coast battalion and above fire-maneuver training.

Character of MEB training for each training area

This section captures the character of MEB training in SW CONUS, GOMEX, and Mid-LANT training areas. This summary is based on the pairing of MEB range requirements and specific local training areas detailed in appendix D.

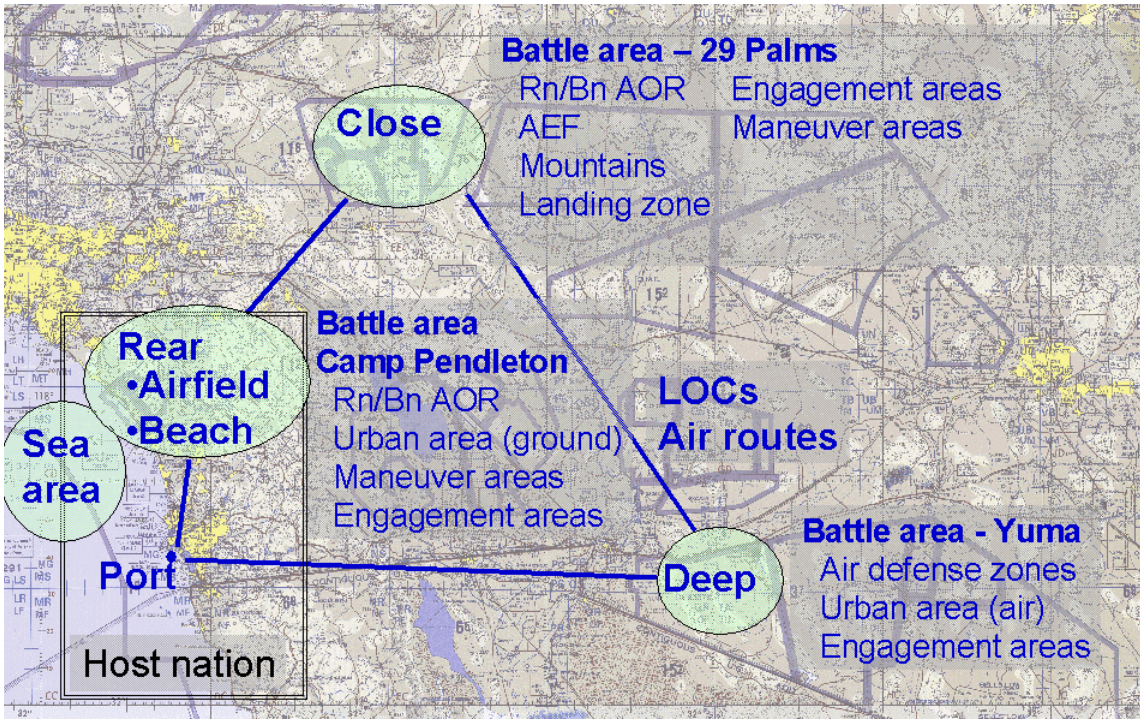
Southwest Continental United States

This area is a training-range rich environment. Given the capability of Marine facilities in the area, it was possible to construct a few solutions to many of the MEB training requirements.

Starting from the operational level, the MEB must allocate ground, air, and combat support between multiple, sequential battles in support of exercise strategic objectives, over large spaces and long times. For the MEB, we large to mean separate brigade-sized battle areas, with enough time for at least two battalion-scale battles. The MAGTF and MEB 2015 guidance specify the operational-level sources and destination of the ground, air, and support forces: sea areas, port, airfield, beach for sources and rear, close, and deep for application of the MEB force. The guidance specifies the character of operations in each of those ares, as seen in the supported actions listed in appendix D. Each area requires an integration of all three MAGTF elements within each area, and the right allocation of forces between the areas to accomplish the MEB mission.

The SW CONUS area was able to support close and rear areas capable of supporting distributed-brigade and multiple-battalion ground operations. The areas Camp Pendleton for rear, and Twentynine Palms for close, are separated by about 110 n.mi, making it difficult to shift forces and support assets from battles in one to the other—stressing as intended the planning and allocation training requirements. Figure 14 shows these areas, and the supporting environmental objects in each.

Figure 14. Candidate identity and linkage of SW CONUS MEB training environment



Yuma serves as a deep battle area, and serves to support air defense and deep strike capabilities. However, Yuma has limited ground maneuver areas. All three areas are supported by movement from the amphibious force or seabase, MPF offloads at the Sea Port Of Embarkation (SPOE) in San Diego, and connected but ground and air lines of communication (LOCs) for moving the support.

The guidance specifies that the tactical level, that is, a single battle, potentially include two coordinated, and one independent, supporting but simultaneous battalion engagements. These battles fight using the ground, fire, and support assets allocated and transported to the battle areas. Both Camp Pendleton and Twentynine Palms can support the tactical capabilities required for the rear and close areas. However, Twenty-nine Palms geography canalizes individual, and separates multi-battalion, movement and maneuver. Additionally, battalion-level forces will have to reposition after 12-24 hours of training, due to the length of the battalion training corridors. Together, the 5-

10 km corridors and need to reset forces for a MEB duration exercise may realistically drive training the use of representational forces at the company-level for maneuver elements, while retaining the full-scale firing, and fire control, elements. Finally, acquisition of impact areas to the west of the current range would allow development of a western live-fire battalion-scale training corridor.

Figure 15 lists the capabilities required at Twentynine Palms to support the close area training.

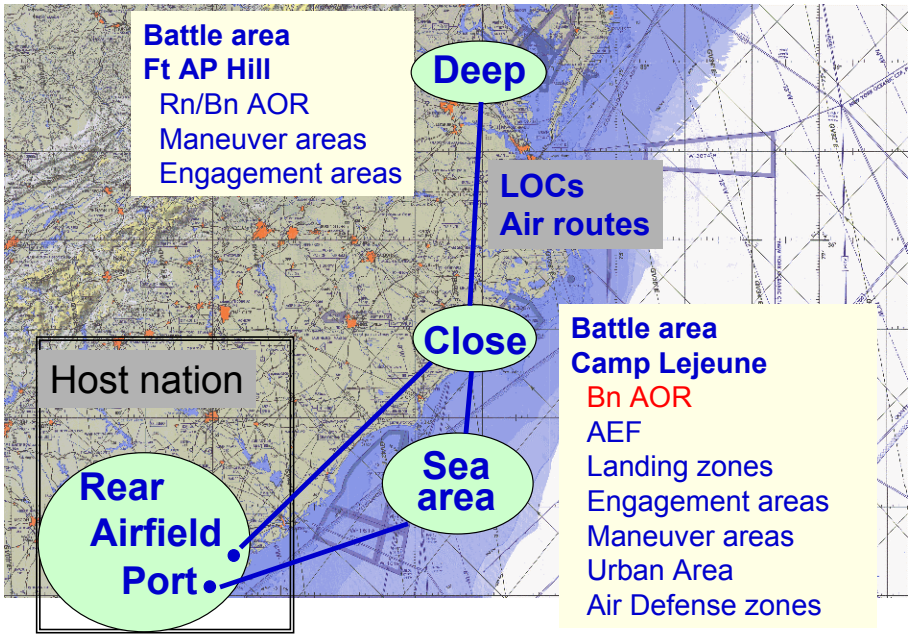
Figure 15. Twentynine Palms support of operational and tactical requirements.

SW CONUS still could not meet all the MEB training requirements. As we discussed in the last section, this area had problems meeting the guidance-driven training environment requirements for seabasing, port combat operations, and rear fire support coordination. Nevertheless, as the next sections show, the SW CONUS area is the strongest of the three considered to support MEB training.

Middle Atlantic coast

We analyzed how facilities in the vicinity of Camp Lejeune can support the MEB training requirements discussed in the last section and detailed in appendix D. Table 10 and figure 16 illustrate one way to meet the MEB training environment requirements. Figure 16 shows that the area can support the requirements for sea, rear, close, and deep host nation areas, and can include an airfield, a MPF port, and lines of communication. It is also important to see that the deep MEB training area is a U.S. Army-owned training range, Ft. AP Hill. The SW CONUS area relies on Marine-controlled ranges only. To support the MEB training requirements, Ft. AP Hill will have to host at least battalion- and possibly brigade-scale fire and maneuver training.

Figure 16. Potential use of Mid-LANT training areas for MEB operational-level training.



Camp Lejeune has difficulties supporting tactical-level MEB live-fire training. The last section discussed coordinating fires and maneuver at the battalion and regimental level at Camp Lejeune. A full battalion might be able to exercise at Camp Lejeune, using the Greater Sandy Run ranges, the K-2 impact range, the Company Battle Course, and the G-10 impact area. However, the tactical integration of these company units and single-artillery/fixed-wing/NSFS fires would require heavy instructor support and coordination, likely assisted by instrumentation and computer simulation. The instructor's role would be to monitor tactical actions in each area and translate the tactical effects of those actions to the non-adjacent areas. The role of the simulation would be to help the instructors with the integration of the multiple company-level actions into a single battle problem.

Camp Lejeune as currently configured is not large enough to support brigade live-fire training. While the base has hosted full-scale regimental training in the past, figure 12 shows that these forces begin training nearly in contact. Given the small maneuver areas at Camp Lejeune, and restrictions to tactical maneuver off ranges and roads, it may be more effective to use company and battalion headquarters command representative forces, with combat and service support forces scaled accordingly. Again the tactical outcomes of battle engagements would require simulation support. The Army has developed training methods and programs using mixes of constructive and real forces supported with simulators, but force instrumentation and lack of small-unit combat friction are the prices paid for this approach. Ultimately, the lack of friction at the tactical level makes solving operational-level planning, assessment, and asset allocation problems too easy at the operational level.

Northern Gulf of Mexico

The northern Gulf of Mexico, GOMEX, has training areas that can support elements of operational- and tactical-level MEB training. One way to use these facilities is to use the Pensacola area, including the Port of Pensacola and NAS Pensacola, as the rear area, Eglin Major Test Range Facility Base, MTRFB, for the close area, and Ft. Polk for the deep area. Eglin MTRFB includes proven amphibious landing beaches and inland fire and maneuver ranges. Figure 17 shows the operational-level use of the GOMEX area.

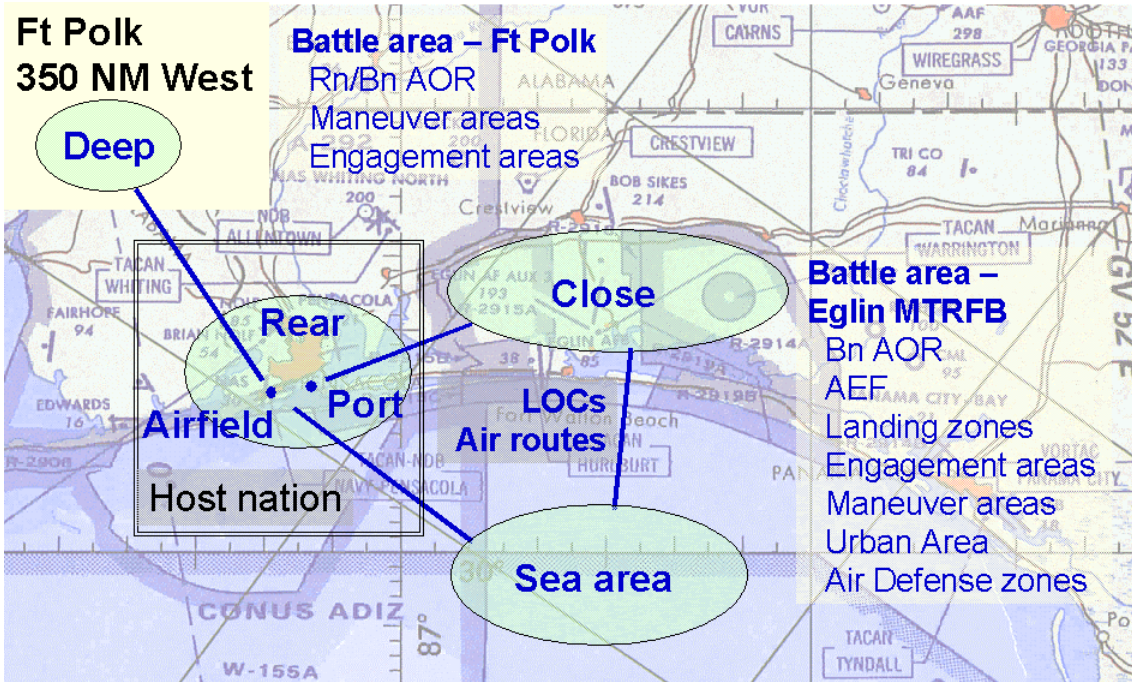
In the GOMEX operational area the same pool of assets can support both the close and rear problems. One solution to this problem is modifying the scenario and exercise play to insert constructive distance between NAS Pensacola and Eglin MTRFB. The shifting of assets between areas must be consistent with that unit's transit speed over the constructive geography. Likewise, lift would have to be committed honoring the constructive, not the actual, distance. Historically, training audiences and trainers have found honoring these kinds of constructive constraints on assets and time problematic in practice.

Figure 17 shows that this includes collapse of the rear and close areas, with their impact on operational-level asset allocation training. There is also a tactical problem with exercising rear-area fire support operations, NAS Pensacola cannot support tactical fires training. This means that Eglin fire ranges would have to support rear-area fire support training, again requiring integration of displaced fires and rear area support operations. This effectively collapses the close and rear engagement areas, or requires simulation-supported rear-area fire support training.

The best candidates for battalion-level deep maneuver fire training is Ft. Polk, Louisiana, or Avon Park, Florida, both approximately 350n.mi from NAS Pensacola. If this distance makes the deep area impractical for training, Pensacola will have to support all MEB fire and maneuver training, deep, close, and rear. Small, representative maneuver units integrated using constructive geography and simulations at the operational level are likely the best way to support MEB training.

Eglin's tactical maneuver and impact areas are larger than Camp Lejeune [3]. Recently, 22 MEU showed that existing ranges easily supported company level-maneuver-fire exercise. However, the tactical integration of these maneuver areas, and all maneuver with supporting fires requires the same kind of approach as Camp Lejeune.

Figure 17. Potential operational role of GOMEX MEB training areas



Finally, none of the required ranges belong to Marine commands, and the Eglin MTRFB obeys OSD test and evaluation rules for both costing and use. In addition to the effort and expense for supporting tactical integration, a feature shared with Camp Lejeune's use for MEB-level training, Eglin MEB training requires payment of a usage fee and large TAD costs.

Summary of candidate MEB training areas

We have seen that all three areas, SW CONUS, Mid-LANT, and GOMEX, can support operational and tactical MEB training. Each contains sea, shore, port, and land maneuver areas, and supports live-fire combined-arms training. Table 11, also shown in the executive summary, summarizes the comparison of these areas.

Table 11. Comparison of MEB training areas

MEB training area	Problems	Potential remedy
SW CONUS[a] San Diego, Camp Pendleton, 29 Palms, Yuma	Limited long-exercise duration multi-Bn maneuver areas at 29 Palms (Close area)	Extend base boundary west to support additional Bn corridor
	Limited ground maneuver curtails fire support in deep area	Use representative forces in deep area as required
	San Clemente NSFS not integrated into maneuver in rear and close battle areas	Use artillery or VAST to simulate integration of NSFS
	Fires in support of port seizure not possible	Use simulated fires to support port seizure
	2015 scenario requires operations from seabase	Amphibs/CVNs as seabase as required
MidLANT[b] Morehead, City, Cherry Point, Camp Lejeune, Ft. Bragg, Ft AP Hill	Limited short-exercise duration Bn maneuver areas at Camp Lejeune (Close area)	Start with Bn forces near contact
	Limited multi-Bn maneuver areas at Camp Lejeune (Close area)	Integrate constructive and representative (Co HQ) forces via simulation
	Single impact area for all supporting close fires, Bn and fires area not adjacent	Integrate constructive and representative fires (FIST) via simulation
	Fires in support of port seizure not possible	Use simulated fires to support port seizure
	2015 scenario requires operations from seabase	Amphibs/CVNs as seabase as required
	Offshore Lejeune	Amphibs as seabase
	No mountain terrain	No mountain terrain
GOMEX[c] Pensacola, Eglin MTRFB, Ft Polk, Avon Park	No operational training areas within 200NM of close training area	Staged tactical and support assets at distant bases to simulated operational maneuver and support, Constructive operational environment
	Limited short-exercise duration Bn maneuver areas at Camp Lejeune (Close area)	Start with Bn forces near contact
	Limited multi-Bn maneuver areas at Camp Lejeune (Close area)	Integrate constructive and representative (Co HQ) forces via simulation
	Single impact area for all supporting close fires, Bn and fires area not adjacent (Close area)	Integrate constructive and representative fires (FIST) via simulation
	No NSFS	Use artillery or VAST to simulate integration of NSFS
	Fires in support of port seizure not possible	Use simulated fires to support port seizure
	2015 scenario requires operations from seabase	Amphibs/CVNs as seabase as required
	Offshore Lejeune	Amphibs as seabase
	No mountain terrain	No mountain terrain

a. Green: MEB training supported with real or Co-level representative forces
b. Yellow: MEB training requires constructive tactical forces or simulator support
c. Red: MEB training requires constructive operational and tactical forces or simulator support

The areas require different levels of operational and tactical simulation support. The SW CONUS battalion and brigade maneuver fire areas are far enough apart to support operational planning and decision-making training. The MEB Mid-LANT supports operational training, but tactical training requires simulation to support battalion-level training. Mid-LANT brigade training will likely require representative units supported by tactical engagement simulation of constructive forces to support operational and tactical training. GOMEX will collapse the operational into the tactical training environment; the lack of nearby battalion and above training areas means that operational-level simulations will likely be needed to allow different areas in the Eglin MTRFB to simulate rear, close, and deep operating areas, using simulations to support integration of representative and constructive forces.

Thus, while all areas support MEB training using fielded forces and live fire, using SW CONUS to Camp Lejeune to GOMEX requires increasing degrees of simulation support, and likely the use of constructive and representative tactical forces. Our methodology details what training requirements these training aids support, but cannot assess the impact of increasing use of constructive forces and simulated engagements on the value of MEB training.

Summary

This memorandum documented our analysis of the MEB training environment. We presented a method for determining the required environmental characteristics to support MEB training. This method showed that each statement of MEB responsibility was also a statement about an element of the training environment required to support training that responsibility. Thus, the set of all MEB responsibilities defines the minimum requirements for the supporting MEB training environment. We presented a method for identifying the subset of required characteristics of the physical training environment. Finally, we showed how the set of physical characteristics can help configure both a notional and actual training environment. The remainder of the memorandum detail the results of comparing MEB training in southwestern continental U.S., the mid-Atlantic coast, and the northern Gulf of Mexico coast.

The following bullets capture the memorandum's significant results.

Identification of the MEB training environment

- Each MEB responsibility, or any piece of command guidance, answers the "who?, what?, and why?" questions of the training environment. Some guidance answers "where?" or "when?"
- The subset of "where or when" guidance for the body of MEB guidance determines the minimal requirements of physical MEB training environment.
- The analytic tool for converting command guidance into training environment requirements is standard lexical analysis, that is, identifying the parts of speech in each guidance sentence.
  - Subject = Who, the training audience
  - Verb clause = Why, the training requirement
  - Verb object and adverb = What, required characteristic.
- The subset of answers to "What and where" for a set of training guidance names the "people, places, and things" the training environment must contain.
- Analysis of the collection of training areas (places) and things (objects or actions in the training areas) for a set of command guidance allows the construction of a notional training environment, a set of required training areas, and content pairs.
- Each area-content pair is associated with at least one, and usually many, training responsibilities that tell "why" the area-content pair is required in the training environment, and who needs it.

Analysis of candidate MEB training areas

- Three candidate MEB training areas, SW CONUS, Mid-LANT, and GOMEX, were analyzed to match the set required area-content pairs to capabilities of the training area. We considered the combined capabilities of multiple civilian and military infrastructure elements.

- We concluded that all areas were s able to support some form of MEB training, although Camp Lejeune and GOMEX would require extensive computer simulation and the use of constructive forces and terrain to support tactical-level MEB training, and GOMEX would require simulation to support operational-level training.
- Camp Lejeune and GOMEX are better suited for tactically focused, battalion-scale, MEB training, where as SW CONUS is suitable for operationally focused, brigade-scale MEB training.
- In situations where simulation and constructive training elements are required, the guidance-environment approach yields a method to define the requirements for the supporting simulations and define the supporting constructive forces or geography.

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Appendix A

Appendix A lists the parsed MEB element responsibilities derived in reference [2], appendix A-D. Table 12 gives each guidance statement and breaks that statement into subject, (MAGTF element and section), verb, verb modifier, object, and object modifier. Further the table identifies if the statement referred to battlespace, assets, or people, as well indicating if that reference occurred as the direct object (O) as verb as object modifier (M). Finally the table lists the relevant operational phase and maximum warfare-level for the task.

Table 12. Parsed MEB responsibilities

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
1	Develop a Direct Support Plan (DSP)	CE as MARFOR		Develop		Direct support	Plan				Planning	Operational
2	Describe intent to maintain OPCON of Marine aviation capabilities/forces	CE as MARFOR		Describe		To maintain Marine aviation OPCON	Intent				Planning	Operational
3	Explain that all Marine Corps sorties are available to JFC for tasking by the JFACC in support of the JFC's overall objectives and campaign plan prior to assignment for ground combat responsibilities	CE as MARFOR		Explain		MC sorties for JFC use	Availabil-ity		M		Planning	Operational
4	Describe intent to use organic aviation assets in direct support of Marine Corps forces in order to accomplish his JFC-assigned mission in the designated MARFOR area of operations	CE as MARFOR		Describe		To use MC aviation assets in direct support	Intent		M		Planning	Operational
5	Describe intent to consolidate, deconflict, prioritize and nominate targets to the joint targeting coordination board (JTCB) to be included on the joint integrated prioritized targeting list (JIPTL)	CE as MARFOR		Describe		To use JTCB and JIPTL	Intent				Planning	Operational
6	Provide a MAGTF generated direct support ATO to merge with the JTF joint ATO via CTAPS/TBMCS	CE as MARFOR		Provide	Via CTAPS/ TBMCS	MAGTF generated direct support, to merge with JTF ATO	ATO				Execution	Operational
7	Allocate sorties in excess of COMMAR-FOR's direct support requirements to the JFC for tasking by the JFACC for use in the execution of joint operations	CE as MARFOR		Allocate	To JFC for JFACC tasking	COMMARFOR excess	Sorties		O	M	Execution	Operational
8	Recommend to the JFACC, if designated as the ACA/AADC, airspace control measures (ACM) that include establishing the MACCS with in MARFOR AO to provide airspace control functions in the MARFOR airspace control sectors as designated by the ACA. Details should be included in the ACP and coordinated with the ACA.	CE as MARFOR		Recom-mend	To JFACC	Airspace control	Measures	M		M	Planning	Operational
9	Develop guidance using the commander's battle space area evaluation (CBAE), expe-rience, and information on the mission from higher headquarters.	CE as MARFOR		Develop	Using CBAE, experience, and higher HQ info		Guidance				Planning	Operational
10	Determine Fire Support Coordination Measures	Command element		Determine		Fire support coordination	Measures	M			Planning	Operational

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
11	Monitor air operations (deep and close)	Command element		Monitor		Deep and close air	Operations	M	M		Planning	Operational
12	Redirect resources as required	Command element		Redirect	As required		Resources		O		Planning	Operational
13	Conduct mission planning via Marine Corps Mission Planning Process	Command element		Conduct	Via MC mission planning process	Mission	Planning				Planning	Operational
14	Estimate aviation capabilities required to accomplish the mission	Command element		Estimate		Mission required aviation	Capabilities				Planning	Operational
15	Identify main effort	Command element		Identify		Main	Effort				Planning	Operational
16	Publish prioritization guidance	Command element		Publish		Prioritization	Guidance				Planning	Operational
17	Publish air apportionment recommendations	Command element		Publish		Air apportionment	Recommendations		M		Execution	Operational
18	Function as commander's primary advisors	CE	Battlestaff	Advise			Commander			O	Planning	Operational
19	Receive, analyze, and distribute information	CE	Battlestaff	Receive			Information				Planning	Operational
20	Receive, analyze, and distribute information	CE	Battlestaff	Analyze			Information				Planning	Operational
21	Receive, analyze, and distribute information	CE	Battlestaff	Distribute			Information				Planning	Operational
22	Make recommendations to the command group	CE	Battlestaff	Make	To command group		Recommendations			M	Planning	Operational
23	Integrate and synchronize resources	CE	Battlestaff	Integrate			Resources		O		Planning	Operational
24	Integrate and synchronize resources	CE	Battlestaff	Synchronize			Resources		O		Planning	Operational
25	Integrate with higher headquarters plan in planning process	CE	Future plans section	Integrate with	In planning process	Higher headquarters	Plan			M	Planning	Operational
26	Serve as link between Higher HQ and Future Operations Section	CE	Future plans section	Link		Higher HQ and Future operations	Staff			O	Planning	Operational

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
27	Focus on next phase or mission, not on immediate or current phase or mission	CE	Future plans section	Focus on		Next, not immediate or current, phase	Phase	M			Planning	Operational
28	Focus on next phase or mission, not on immediate or current phase or mission	CE	Future plans section	Focus on		Next, not immediate or current, mission	Mission	M			Planning	Operational
29	Establish an operational planning team to focus planning effort and gather expertise	CE	Future plans section	Establish	To focus planning effort and gather expertise	Operational planning	Team			O	Planning	Operational
30	Develop mission with regard to MAGTF capabilities, command relationship requirements, and battlespace	CE	Future plans section	Develop	With regard to MAGTF capabilities, command relationships, and battlespace		Mission	M			Planning	Operational
31	Coordinate future plans and current operations sections to integrate planning of the next battle	CE	Future operations section	Coordinate	To integrate planning of the next battle	Future plans sections	Staff			O	Planning	Operational
32	Coordinate future plans and current operations sections to integrate planning of the next battle	CE	Future operations section	Coordinate	To integrate planning of the next battle	Future plans sections	Staff			O	Planning	Operational
33	Integrate staff sections' plans officers, warfighting function representatives, and subordinate LNOs into the planning process	CE	Future operations section	Integrate	Into planning process	Section plan's officers, warfighting functional reps, and subordinate LNOs	Staff			O	Planning	Operational
34	Develop branch plans and sequels	CE	Future operations section	Develop		Branchs and sequels	Plans	M			Planning	Operational
35	Recommend potential commander's critical information requirements (CCIRs)	CE	Future operations section	Recommend		Potential commander critical information	Requirements				Planning	Operational
36	Interact with intelligence collection and targeting processes to shape the next battle	CE	Future operations section	Interact with	To shape next battle	Intelligence collection and targeting	Processes	M			Planning	Operational

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
37	Coordinate and executes the OPORD	CE	Current operations section	Coordinate			OPORD				Execution	Operational
38	Coordinate and executes the OPORD	CE	Current operations section	execute			OPORD				Execution	Operational
39	Prepare and transmit the OPORD	CE	Current operations section	Prepare			OPORD				Planning	Operational
40	Prepare and transmit the OPORD	CE	Current operations section	Transmit			OPORD				Planning	Operational
41	Monitor operations of the force	CE	Current operations section	Monitor		Force	Operations	M	M		Execution	Operational
42	Track CCIRs and immediately reports relevant information to the commander	CE	Current operations section	Track		Commander critical information	Requirements				Execution	Operational
43	Track CCIRs and immediately reports relevant information to the commander	CE	Current operations section	Report	Immediately to commander	Relevant	Information				Execution	Operational
44	Analyze battlespace information	CE	Current operations section	Analyze		Battlespace	Information	M			Execution	Operational
45	Develop new COAs, allocate resources, and prepare fragmentary orders to modify current OPORD, as required	CE	Current operations section	Develop	To modify current OPORD as required	New	COAs				Planning	Operational
46	Develop new COAs, allocate resources, and prepare fragmentary orders to modify current OPORD, as required	CE	Current operations section	Allocate	To modify current OPORD as required		Resources		O		Planning	Operational
47	Develop new COAs, allocate resources, and prepare fragmentary orders to modify current OPORD, as required	CE	Current operations section	Prepare	To modify current OPORD as required	Fragmentary	Orders				Planning	Operational
48	Assess shaping actions and progress toward commander's decisive actions	CE	Current operations section	Assess		Shaping	Actions	M	M		Execution	Operational

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
49	Assess shaping actions and progress toward commander's decisive actions	CE	Current operations section	Assess		Toward commander's decisive actions	Progress				Execution	Operational
50	Monitor the status of forces and material	CE	Current operations section	Monitor		Forces and material	Status		M		Execution	Operational
51	Monitor rear area operations	CE	Current operations section	Monitor		Rear area	Operations	M	M		Execution	Operational
52	Coordinate terrain management	CE	Current operations section	Coordinate		Terrain	Management	M			Execution	Operational
53	Maintain essential maps and information	CE	Current operations section	M		Essential map related	Information				Execution	Operational
54	Provide future operations section with situational awareness	CE	Current operations section	Provide	To future operations section	Situation	Awareness				Execution	Operational
55	Conduct integrated planning	CE	OPT	Conduct		Integrated	Planning				Planning	Operational
56	Conduct mission analysis	CE	OPT	Conduct		Mission	Analysis				Planning	Operational
57	Develop wargame COAs	CE	OPT	Develop		Wargame	COAs				Planning	Operational
58	Assist commander in COA selection	CE	OPT	Assist	In COA selection		Commander			O	Planning	Operational
59	Assist staff in preparation and transition of OPORD	CE	OPT	Assist	In preparation and transition of OPORD		Staff			O	Planning	Operational
60	Serve as lynchpin between future plans, future operations, and current operations sections	CE	OPT	Link		Future plans, future operations, and current operations staff sections	Staff			O	Planning	Operational
61	Plan fire support operations for the deep, close and rear operations	GCE	FFCC	Plan		Deep, close, and rear fire support	Operations	M	M		Planning	Operational
62	Coordinate fire support operations for the deep, close, and rear operations	GCE	FFCC	coordinate		Deep, close, and rear fire support	Operations	M	M		Planning	Operational
63	Conduct fire support operations for the deep, close, and rear operations	GCE	FFCC	Conduct		Deep, close, and rear operation fire support	Operations	M	M		Execution	Operational

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
64	Identify requirements	GCE	FFCC	Identify			Require-ments				Planning	Operational
65	Develop estimates of supportability	GCE	FFCC	Develop		Supportability	Estimates				Planning	Operational
66	Provide input to the operations order (OPORD)and develop appropriate or required annexes and appendices	GCE	FFCC	Provide		OPORD	Input				Planning	Operational
67	Provide input to the operations order (OPORD)and develop appropriate or required annexes and appendices	GCE	FFCC	Develop		Appropriate or required OPORD	Annexes				Planning	Operational
68	Establish targeting board	GCE	FFCC	Establish		Targeting	Board			O	Planning	Operational
69	Establish targeting procedures and pro-cesses for the execution phase of the oper-ation	GCE	FFCC	Establish		Execution phase targeting	Proce-dures				Planning	Operational
70	Establish targeting procedures and pro-cesses for the execution phase of the oper-ation	GCE	FFCC	Establish		Execution phase targeting	Processes				Planning	Operational
71	Monitor and make recommendations to the division commander for allocating fire support	GCE	FFCC	Monitor		Fire support alloca-tion	Recom-menda-tions		M		Execution	Operational
72	Monitor and make recommendations to the division commander for allocating fire support	GCE	FFCC	Make	To division commander	Fire support alloca-tion	Recom-menda-tions		M	M	Execution	Operational
73	Perform targeting functions or processes	GCE	FFCC	Perform		Targeting	Functions	M	M		Execution	Operational
74	Conduct fire support operations in the MAGTF deep operation	GCE	FFCC	Conduct		MAGTF deep fire support	Opera-tions	M	M		Execution	Operational
75	Conduct fire support operations in the close and rear operations	GCE	FFCC	Conduct		Close and rear fire support	Opera-tions	M	M		Execution	Operational
76	Provide liaison to division forces for artil-lery control and coordination	GCE	Fire sup-port coor-dination section	Provide	To division forces	Artillery control and coordination	Liaison			O	Execution	Tactical
77	Coordinate all supporting arms to support the concept of operations	GCE	Fire sup-port coor-dination section	Coordinate	To support the concept of opera-tions	Supporting	Arms		O		Execution	Tactical
78	Conduct targeting acquisition, target dis-semination, and attack recommendation and assessment	GCE	Target informa-tion section	Conduct		Targeting	Acquisi-tion	M	M		Execution	Tactical

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
79	Conduct targeting acquisition, target dissemination, and attack recommendation and assessment	GCE	Target information section	Conduct		Target	Dissemination	M	M		Execution	Tactical
80	Conduct targeting acquisition, target dissemination, and attack recommendation and assessment	GCE	Target information section	Conduct		Attack	Assessment	M	M		Execution	Tactical
81	Conduct targeting acquisition, target dissemination, and attack recommendation and assessment	GCE	Target information section	Recommend			Attack	M	M		Execution	Tactical
82	Advise the division commander, staff, and commander's of units that do not a have a TACP on air support, including AAW	GCE	Air section	Alert	To units lacking TACP on air support, including AAW	Division and unit	Commanders			O	Planning	Tactical
83	Advise the division commander, staff, and commander's of units that do not a have a TACP on air support, including AAW	GCE	Air section	Alert	To units lacking TACP on air support, including AAW	Division and unit commander	Staffs			O	Planning	Tactical
84	Participate in forming operation plans and orders on air employment	GCE	Air section	Participate in		Air employment operational plans and orders	Formulating				Planning	Operational
85	Participate with the FSC in targeting and selecting appropriate means of attack	GCE	Air section	Participate in	With FSC		Targeting			M	Execution	Operational
86	Participate with the FSC in targeting and selecting appropriate means of attack	GCE	Air section	Participate in	With FSC	Appropriate means of attack	Selecting			M	Execution	Operational
87	Prioritize and resolve conflicts in air support requests (ASR)	GCE	Airsection	Prioritize		Air support	Requests		M		Execution	Tactical
88	Prioritize and resolve conflicts in air support requests (ASR)	GCE	Air section	Resolve		Air support request	Conflicts		M		Execution	Tactical
89	Prepare, forward, and coordinate ASRs	GCE	Air section	Prepare		Air support	Requests		M		Execution	Tactical
90	Prepare, forward, and coordinate ASRs	GCE	Air section	Forward		Air support	Requests		M		Execution	Tactical
91	Prepare, forward, and coordinate ASRs	GCE	Air section	Coordinate		Air support	Requests		M		Execution	Tactical

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
92	Relay pertinent information to other tactical air control elements	GCE	Airsection	Relay	To other tactical air control elements	Pertinent	Information			M	Execution	Tactical
93	Establish and maintain facilities for liaison and communications between supported units and appropriate control agencies	GCE	Naval gunfire section	Establish		Supported unit and control agency liaison and communications	Facilities		O		Execution	Tactical
94	Establish and maintain facilities for liaison and communications between supported units and appropriate control agencies	GCE	Naval gunfire section	Maintain		Supported unit and control agency liaison and communications	Facilities		O		Execution	Tactical
95	Inform and advise the GCE commander on employing, requesting, and controlling NSFS	GCE	Naval gunfire section	Advise	On employing, requesting, and controlling NSFS	GCE	Commander			O	Execution	Tactical
96	Plan, coordinate, and integrate supporting arms to support the regiment's scheme of maneuver for current and future operations	Rn FSCC		Plan	To support regiment's current and future scheme of maneuver	Supporting	Arms	M	O		Planning	Operational
97	Plan, coordinate, and integrate supporting arms to support the regiment's scheme of maneuver for current and future operations	Rn FSCC		Coordinate	To support regiment's current and future scheme of maneuver	Supporting	Arms	M	O		Planning	Operational
98	Plan, coordinate, and integrate supporting arms to support the regiment's scheme of maneuver for current and future operations	Rn FSCC		Integrate	To support regiment's current and future scheme of maneuver	Supporting	Arms	M	O		Planning	Operational
99	Develop the regiment's fire support plan	Rn FSCC		Develop		Regiment fire support	Plan				Planning	Tactical

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
100	Perform targeting process and develop targets with its own target acquisition assets, in addition to those developed at higher headquarters	Rn FSCC		Perform	With own target acquisition assets	Process	Targeting		M		Execution	Tactical
101	Perform targeting process and develop targets with its own target acquisition assets, in addition to those developed at higher headquarters	Rn FSCC		Develop	With own target acquisition assets	In addition to higher headquarters targets	Targets		O		Execution	Tactical
102	Allocate assets for the attack of targets in its area of operations (assets include direct support artillery battalion and available NSFS and aviation)	Rn FSCC		Allocate		AOR target attack including direct support artillery battalion and available NSFS and aviation	Assets		O		Execution	Tactical
103	Request NSFS and air support, and plans fires within the regiment's area of operations	Rn FSCC		Plan		Regiment AOR NSFS and air support	Fires		O		Execution	Tactical
104	Request NSFS and air support, and plans fires within the regiment's area of operations	Rn FSCC		Request		Regiment AOR NSFS and air support	Fires		O		Execution	Tactical
105	Allocate fire support assets to subordinate battalions (CAS sorties, NSFS ships, etc)	Rn FSCC		Allocate	To subordinate battalions	Fire support assets, including CAS sorties, NSFS ships, etc	Assets		O		Execution	Tactical
106	Assists and supervises subordinate FSCCs	Rn FSCC		Assist		Subordinate	FSCCs			O	Execution	Tactical
107	Assists and supervises subordinate FSCCs	Rn FSCC		Supervise		Subordinate	FSCCs			O	Execution	Tactical
108	Coordinate clearance of fires that affect the regiment's area of operations. Normally, coordination will be conducted by subordinate battalions while the regiment monitors and effects coordination with higher, adjacent, and subordinate units, as required	Rn FSCC		Monitor		Fires affecting regiments AO	Clearance	M	M		Execution	Tactical
109	Coordinate clearance of fires that affect the regiment's area of operations. Normally, coordination will be conducted by subordinate battalions while the regiment monitors and effects coordination with higher, adjacent, and subordinate units, as required	Rn FSCC		Coordinate	Normally subordinate battalion conducts	Fires affecting regiments AO	Clearance	M	M		Execution	Tactical

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
110	Coordinate clearance of fires that affect the regiment's area of operations. Normally, coordination will be conducted by subordinate battalions while the regiment monitors and effects coordination with higher, adjacent, and subordinate units, as required	Rn FSCC		Coordinate with	To coordinate fires affecting regiments AO	Higher, adjacent and subordinate as required	Units			O	Execution	Tactical
111	Coordinate ingress and egress routes for all aviation missions including assault support, CAS, and reconnaissance	Rn FSCC		Coordinate		All aviation mission ingress and egress	Routes	O			Execution	Tactical
112	Coordinate employment of all supporting arms in support of the regiment	Rn FSCC		Coordinate		Of all arms supporting regiment	Employment		M		Execution	Tactical
113	Provide battle damage assessment and situational updates to higher headquarters	Rn FSCC		Provide	To higher headquarters	Battle damage	Assessment			M	Execution	Tactical
114	Provide battle damage assessment and situational updates to higher headquarters	Rn FSCC		Provide	To higher headquarters	Situational	Updates			M	Execution	Tactical
115	Conduct artillery liaison and coordination functions for the regiment	Rn FSCC	Liaison section	Conduct	For the regiment	Liaison and coordination	Functions			M	Planning	Tactical
116	Operates the fire support coordination and artillery nets in the FSCC	Rn FSCC	Liaison section	Operate		FSCC fire support coordination	Nets		O		Execution	Tactical
117	Advise regiment commander on aviation matters	Rn FSCC	Tactical air control party (TACP)	Advise	On aviation matters	Regiment	Commander			O	Planning	Tactical
118	Establish and maintain facilities for liaison and communications between supported units and appropriate control agencies	Rn FSCC	NSFS liaison team	Establish		Liaison and communications between supported units and appropriate control agencies	Facilities		O		Execution	Tactical
119	Establish and maintain facilities for liaison and communications between supported units and appropriate control agencies	Rn FSCC	NSFS liaison team	Maintain		Liaison and communications between supported units and appropriate control agencies	Facilities		O		Execution	Tactical

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
120	Inform and advise the GCE commander on employing, requesting, and controlling NSFS	Rn FSCC	NSFS liaison team	Inform	Of employing, requesting, and controlling NSFS	GCE	Commander			O	Planning	Tactical
121	Inform and advise the GCE commander on employing, requesting, and controlling NSFS	Rn FSCC	NSFS liaison team	Advise	On employing, requesting, and controlling NSFS	GCE	Commander			O	Planning	Tactical
122	Plan and coordinate artillery fires at the company level	Bn FSCC	Liaison section	Plan		Company-level artillery	Fires		O		Planning	Tactical
123	Plan and coordinate artillery fires at the company level	Bn FSCC	Liaison section	Coordinate		Company-level artillery	Fires		O		Planning	Tactical
124	Call for and adjust artillery fires	Bn FSCC	Liaison section	Call for		Artillery	Fires		O		Execution	Tactical
125	Call for and adjust artillery fires	Bn FSCC	Liaison section	Adjust		Artillery	Fires		O		Execution	Tactical
126	Battalion TACP OIC (including FACs) serves within the FSCC as the air representative	Bn FSCC	TACP	Serve as		FSCC air	Representative			O	Execution	Tactical
127	Provide input to the company fire plan	Bn FSCC	TACP	Provide		Company fire support plan	Input				Execution	Tactical
128	Spot teams call for and adjust NSFS	Bn FSCC	Shore fire control party	Call for		NSFS	Fires		O		Execution	Tactical
129	Spot teams call for and adjust NSFS	Bn FSCC	Shore Fire Control Party	adjust		NSFS	Fires		O		Execution	Tactical
130	Represent 81mm mortal platoon in the Bn FSCC	Bn FSCC	81mm mortar platoon representative	serve as		Bn FSCC 81mm mortar	Representative			O	Execution	Tactical
131	FO teams call for and adjust mortar fires	Bn FSCC	81mm mortar platoon representative	Call for		Mortar	Fires		O		Execution	Tactical

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
132	FO teams call for and adjust mortar fires	Bn FSCC	81mm mortar platoon representative	Adjust		Mortar	Fires		O		Execution	Tactical
133	Coordinate supporting arms with the company's scheme of maneuver	Bn FSCC	81mm mortar platoon representative	Coordinate	With Co's maneuver scheme	Supporting	Arms	M	O		Execution	Tactical
134	Report pertinent information such as the location of friendly artillery units, fire support coordinating measures (FSCMs), and artillery antiaircraft weapons to other staff sections of the MAGTF FFCC for further dissemination as required	Senior GCE FSCC		Report	To the MAGTF FFCC for further dissemination as required	Pertinent, including, location of friendly artillery units, fire support coordinating measures (FSCMs), and artillery antiaircraft weapons	Information				Execution	Tactical
135	Conduct targeting functions to meet the GCE commander's intent	Senior GCE FSCC		Conduct	To meet the GCE commanders intent	Targeting	Functions				Execution	Tactical
136	Serve on the MAGTF targeting committee	Senior GCE FSCC		Serve on		MAGTF targeting	Committee			O	Execution	Tactical
137	Establish reporting requirements, FSCMs (ex restricted fire areas, RFAs), and fire support coordination procedures when existing procedures are inadequate	Senior GCE FSCC		Establish		Reporting	Requirements				Planning	Tactical
138	Establish reporting requirements, FSCMs (ex restricted fire areas, RFAs), and fire support coordination procedures when existing procedures are inadequate	Senior GCE FSCC		Establish		Fire support coordination	Measures	M			Planning	Tactical
139	Establish reporting requirements, FSCMs (ex restricted fire areas, RFAs), and fire support coordination procedures when existing procedures are inadequate	Senior GCE FSCC		Establish	When existing procedures are inadequate	Fire support coordination	Procedures				Planning	Tactical
140	Use commander's CBAE to frame fire support's role in the plan	FSC	Mission analysis	frame	Using commander's CBAE	Planned fire support	Role				Planning	Operational
141	Identify specified and implied tasks	FSC	Mission analysis	Identify		Specified and implied	Tasks				Planning	Operational

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
142	Determine essential fire support tasks (EFSTs) that need to be accomplished to achieve the commander's guidance	FSC	Mission analysis	Determine		Commander's guidance predicated essential fire support	Tasks				Planning	Operational
143	Understand and apply the affects that Intelligence Preparation of the Battlespace (IPB) has on fire support	FSC	Mission analysis	Understand		Intelligence Preparation of the Battlespace fire support	Effects	M			Planning	Operational
144	Understand and apply the affects that Intelligence Preparation of the Battlespace (IPB) has on fire support	FSC	Mission analysis	Apply		Intelligence Preparation of the Battlespace fire support	Effects	M			Planning	Operational
145	Based on commander's guidance, analyze the enemy centers of gravity to determine the threat weakness that are critical vulnerabilities	FSC	Mission analysis	Analyze	Based on commander's guidance to determine threat's critical vulnerabilities	Enemy gravity	Centers				Planning	Operational
146	Translate data on supporting arms into meaningful capabilities	FSC	Mission analysis	Translate	Into meaningful capabilities	Supporting arms	Data		M		Planning	Operational
147	Issue warning order to subordinate FSCs, observer, or supporting arms representative and include mission of supported unit, commander's intent and his guidance for fires, and proposed EFSTs	FSC	Mission analysis	Issue	To subordinate FSCs, supporting arms reps	Warning	Orders			M	Planning	Tactical
148	Conceptualize how to integrate fires into each developing COA	FSC	COA development	Conceptualize		COA supporting fires	Integration				Planning	Operational
149	Develop targets as part of COA development at all echelons	FSC	COA development	Develop	As part of COA development at all levels		Targets		O		Planning	Operational
150	Determine fire support and acquisition asset requirements to accomplish the fire support tasks assigned to each supporting arms agency	FSC	COA development	Determine		Individual supporting agency fire support and acquisition asset, to accomplish assigned fire support tasks	Requirements				Planning	Operational

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
151	Request additional resources as deemed necessary	FSC	COA development	Request		Additional, as required	Resources		O		Planning	Operational
152	Build a reconnaissance and surveillance (R&S) plan based upon the COA's scheme of maneuver and identify an asset to accomplish the task, plan to get asset in place and observe for assessment feedback	FSC	COA development	Build		Reconnaissance and surveillance, based on COA's scheme of maneuver	Plan				Planning	Operational
153	Build a reconnaissance and surveillance (R&S) plan based upon the COA's scheme of maneuver and identify an asset to accomplish the task, plan to get asset in place and observe for assessment feedback	FSC	COA development	Identify		To accomplish task [plan]	Asset		O		Planning	Operational
154	Build a reconnaissance and surveillance (R&S) plan based upon the COA's scheme of maneuver and identify an asset to accomplish the task, plan to get asset in place and observe for assessment feedback	FSC	COA development	Plan to		Asset to observe for assessment feedback	Emplace	M	M		Planning	Operational
155	Understand the tentative timing of the scheme of maneuver and establish triggers	FSC	COA development	Establish	Based on timing and scheme of maneuver		Triggers	M	M		Planning	Tactical
156	Understand the tentative timing of the scheme of maneuver and establish triggers	FSC	COA development	Establish			Triggers				Planning	Tactical
157	Apply doctrine and accepted planning factors to ensure plan is feasible	FSC	COA development	Apply	To ensure plan feasibility		Doctrine				Planning	Tactical
158	Apply doctrine and accepted planning factors to ensure plan is feasible	FSC	COA development	Apply	To ensure plan feasibility	Accepted planning	Factors				Planning	Tactical
159	Draft a fire support execution matrix (FSEM)	FSC	COA development	Draft		Fire support execution	Matrix				Planning	Tactical
160	Draft target list worksheet and overlay	FSC	COA development	Draft		Target list	Worksheet				Planning	Tactical

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
161	Draft target list worksheet and overlay	FSC	COA development	Draft		Target list	Overlay				Planning	Tactical
162	Draft target synchronization matrix	FSC	COA development	Draft		Target synchronization	Matrix				Planning	Tactical
163	Validate and refine the fire support plan	FSC	COA wargaming	Validate		Fire support	Plan				Planning	Tactical
164	Validate and refine the fire support plan	FSC	COA wargaming	Refine		Fire support	Plan				Planning	Tactical
165	Validate fire support tasks	FSC	COA wargaming	Validate		Fire support	Tasks				Planning	Tactical
166	Identify refinements to existing tasks (including assigning the task to another supporting arms agency)	FSC	COA wargaming	Identify		Existing task, including reassignment,	Refinements				Planning	Tactical
167	Identify additional fire support tasks	FSC	COA wargaming	Identify		Additional fire support	Tasks				Planning	Tactical
168	Prepare estimates of supportability	FSC	COA wargaming	Prepare		Supportability	Estimates				Planning	Tactical
169	Brief estimates of supportability to each COA to the commander	FSC	COA comparison and decision	Brief	`to the commander	COA supportability	Estimates			M	Planning	Operational
170	Brief advantages and disadvantages	FSC	COA comparison and decision	Brief		[COA] Advantages and disadvantages	[Assessment]				Planning	Operational
171	Issue warning order to subordinate commanders and appropriate supporting arms agencies	FSC	COA comparison and decision	Issue	To subordinate commanders and appropriate supporting arms agencies	Warning	Order			M	Planning	Tactical
172	Finalize plans for acquiring, tracking, attacking, and assessing actions taken again High Priority Targets (HPTs)	FSC	Order development	Finalize		Acquiring, tracking, attacking, and assessing High Priority Target actions	Plans	M	M		Planning	Tactical

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
173	Finalize schedules of fire, FSCMs, and FSEMs	FSC	Order development	Finalize		Fire, FSCMs, FSEM	Schedules	M			Planning	Tactical
174	Finalize the engagement areas	FSC	Order development	Finalize		Engagement	Areas	O			Planning	Tactical
175	Finalize triggers (offensive maneuver or action, defensive physical ground spot	FSC	Order development	Finalize		Offensive maneuver or action	Triggers	M	M		Planning	Tactical
176	Develop the observation plan to include the task and purpose for each phase of the operation	FSC	Order development	Develop		Observation, including the task and purpose for each phase	plan				Planning	Tactical
177	Rehearse the fire support plan to test synchronization of the fire support plan with the scheme of maneuver, target execution responsibilities (primary and alternate observers), artillery and motar positioning and movement plans, and verification of target acquisition	FSC	Transition	Rehearse	To test synchronization of the FSP, scheme of maneuver, target execution responsibilities (observers) artillery and motar positioning and movement and verification of target acquisition	Fire support	Plan				Planning	Tactical
178	Plan FSCMs, CAS employment, and verification of windows to mass battalion fires.	FSC	Transition	Plan		Fire support coordination	Measures	M			Planning	Tactical
179	Plan FSCMs, CAS employment, and verification of windows to mass battalion fires.	FSC	Transition	Plan		CAS	Employment		M		Planning	Tactical
180	Plan FSCMs, CAS employment, and verification of windows to mass battalion fires.	FSC	Transition	Plan		Mass battalion fire windows	Verification				Planning	Tactical
181	Include fire support refinements from subordinate elements	FSC	Transition	Include	From subordinate commands	Subordinate element fire support	Refinements			M	Planning	Tactical

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
182	Recommend changes to the fire support plan to the commander based on situational developments	FSC	Transition	Recommend	To commander based on situation developments	Fire support plan	Changes			M	Planning	Tactical
183	Reassign targets to other supporting arms as required	FSC	Transition	Reassign	To other supporting arms as required		Targets		O		Planning	Tactical
184	Acquire preliminary coordination for clearance to fire on targets	FSC	Misc	Acquire		Preliminary target fire clearance	Coordination				Planning	Tactical
185	Coordinate the positioning of the fire support assets	FSC	Misc	Coordinate		Fire support assets	Positioning	M	M		Planning	Tactical
186	Coordinate fire support delivery procedures and observations coverage	FSC	Misc	Coordinate		Fire support delivery	Procedures				Planning	Tactical
187	Coordinate fire support delivery procedures and observations coverage	FSC	Misc	Coordinate		Observation	Coverage	M			Planning	Tactical
188	Coordinate fire support communications	FSC	Misc	Coordinate		Fire support	Communications				Planning	Tactical
189	Coordinate the delivery of specialized minitions	FSC	Misc	Coordinate		Specialized munitions	Delivery		M		Planning	Tactical
190	Effect other required coordination	FSC	Misc	Effect		Other required	Coordination				Planning	Tactical
191	Disseminate the fire support plan	FSC	Misc	Disseminate		Fire support	Plan				Planning	Tactical
192	Be able to execute quick fire support planning	FSC	Misc	Ensure		Quick fire support planning	Ability				Planning	Tactical
193	Targeting within the MAGTF CE is performed by the FFCC targeting cell (Perform targeting function within MAGTF CE)	FSC	FFCC targeting cell	Perform	Within MAGTF CE		Targeting				Execution	Tactical
194	Exercise cognizance of the majority of the MAGTF's intelligence production capabilities	FSC	FFCC targeting cell	Monitor		MAGTF intelligence production	Capabilities				Execution	Tactical
195	Access external MAGTF collection and production assets that can provide intelligence support	FSC	FFCC targeting cell	Access		External intelligence support collection and production	Assets		O		Execution	Operational

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
196	Establish a MAGTF target list	FSC	FFCC targeting cell	Establish		MAGTF target	List	M	M		Planning	Operational
197	Develop commander's priority intelligence requirements (PIR)	FSC	FFCC targeting cell	Develop		Commander's priority intelligence	Requirements				Planning	Operational
198	Make target recommendations to the amphibious force and/or Joint Task Force	FSC	FFCC targeting cell	Make	To the amphibious force and/or JTF	Target	Recommendations		M	M	Planning	Operational
199	Conduct target value analysis (TVA)	FSC	FFCC targeting cell	Conduct		Target value	Analysis				Planning	Operational
200	Develop the following products:	FSC	G-2/S-2								Planning	Operational
201	Target acquisition tasking	FSC	G-2/S-3	Develop		Target acquisition	Tasking	M	M		Planning	Operational
202	High-payoff target list	FSC	G-2/S-4	Develop		High-payoff target	List	M	M		Planning	Operational
203	Attack guidance matrix	FSC	G-2/S-5	Develop		Attack guidance	Matrix				Planning	Operational
204	Targeting selection standards	FSC	G-2/S-6	Develop		Targeting selection	Standards				Planning	Operational
205	Requirements for battle damage assessment	FSC	G-2/S-7	Develop		BDA	Requirements				Planning	Operational
206	Maintain required target and situation maps	FSC	Target Information Section (TIS)	Maintain		Required target and situation	Maps		O		Execution	Tactical
207	Maintain target data using automated methods, ex target files	FSC	TIS	Maintain	Using automated methods	Target	Data	M	M		Execution	Tactical
208	Consolidate, evaluate, and display target information and intelligence	FSC	TIS	Consolidate		Target	Information	M	M		Execution	Tactical
209	Consolidate, evaluate, and display target information and intelligence	FSC	TIS	Evaluate		Target	Information	M	M		Execution	Tactical
210	Consolidate, evaluate, and display target information and intelligence	FSC	TIS	Display		Target	Information	M	M		Execution	Tactical
211	Consolidate, evaluate, and display target information and intelligence	FSC	TIS	Consolidate		Target	Intelligence	M	M		Execution	Tactical
212	Consolidate, evaluate, and display target information and intelligence	FSC	TIS	Evaluate		Target	Intelligence	M	M		Execution	Tactical
213	Consolidate, evaluate, and display target information and intelligence	FSC	TIS	Display		Target	Intelligence	M	M		Execution	Tactical

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
214	Recommend target classification and attack priorities to the FSC as required	FSC	TI)	Recommend		Target	Classification	M	M		Execution	Tactical
215	Recommend target classification and attack priorities to the FSC as required	FSC	TIS	Recommend		Target attack	priorities	M	M		Execution	Tactical
216	Obtain information and intelligence on the results of attack on targets by the supporting arms from all elements and sources	FSC	TIS	obtain	from all elements and sources	supporting arms attack results	information	M	M		Execution	Tactical
217	Obtain information and intelligence on the results of attack on targets by the supporting arms from all elements and sources	FSC	TIS	obtain	from all elements and sources	supporting arms attack results	intelligence	M	M		Execution	Tactical
218	Coordinate all matters with MAGTF target intelligence officer and artillery unit S-2 for target and counterfire intelligence support	FSC	TIS	Coordinate	with MAGTF target intelligence officer and artillery unit S-2	all target and counterfire intelligence support	matters			M	Execution	Tactical
219	Maintain current lists of targets to include countermortar, counterbattery, and SEAD lists and provide this information to the supporting arms representatives and to the LF as a whole	FSC	TIS	Maintain		current, including counterbattery and SEAD, target	lists	M	M		Execution	Tactical
220	Maintain current lists of targets to include countermortar, counterbattery, and SEAD lists and provide this information to the supporting arms representatives and to the LF as a whole	FSC	TIS	Provide	To supporting arms representatives and whole LF	Current, including counterbattery and SEAD, target	Lists		M	M	Execution	Tactical
221	Prepare and ensure dissemination of target bulletins after control of the amphibious force target list has been passed ashore	FSC	TIS	Prepare	After amphibious force control passage ashore	Targets	Bulletins	M	M		Execution	Tactical
222	Prepare and ensure dissemination of target bulletins after control of the amphibious force target list has been passed ashore	FSC	TIS	Ensure	After amphibious force control passage ashore	Target bulletin	Dissemination				Execution	Tactical

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
223	Perform as the clearing house for all target information gathered at lower levels	FSC	Division (highest S-2)	Perform as		[Integrated] subordinate level target information	Agency			O	Execution	Tactical
224	Merge all subordinate FSCC lists of targets into one MAGTF target list for a given 24-hour period. Provide for SACC for amphib ops)	FSC	Division (highest S-2)	Merge	Into consolidated MAGTF target list for given 24-hour period	Subordinate FSCC target	Lists	M	M		Execution	Tactical
225	Advise the commander of changes in the status of fire support	Basic fire support coordination tasks		Advise	Of changed in fire support status		Commander			O	Execution	Tactical
226	Recommend changes in fire support employment based on the current tactical situation	Basic fire support coordination tasks		Recommend	Based on current tactical situation	Fire support employment	Changes				Execution	Tactical
227	Deliver fires on targets detected in the targeting process by executing attack guidance	Basic fire support coordination tasks		Deliver	On targets detected in the targeting process by executing attack guidance		Fires		O		Execution	Tactical
228	Deliver fires on targets detected in the targeting process by executing attack guidance	Basic fire support coordination tasks		Execute		Attack	Guidance				Execution	Tactical
229	Select the best supporting arms to attack a target considering availability, weaponeering, and coordination requirements	Basic fire support coordination tasks		Select	Considering availability, weaponeering and coordination requirements	Best supporting target attack	Arms				Execution	Tactical
230	Clear requests for fire using an established approval mode	Basic fire support coordination tasks		Clear	Using an established approval mode	Fire	Requests	M	M		Execution	Tactical

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
231	Integrate fires to support the scheme of maneuver	Basic fire support coordination tasks		Integrate	To support scheme of maneuver		Fires		O		Execution	Tactical
232	Coordinate fires to support the scheme of maneuver	Basic fire support coordination tasks		Coordinate	To support scheme of maneuver		Fires		O		Execution	Tactical
233	Coordinate fires between the observer and supporting arms and/or multiple firing units	Basic fire support coordination tasks		Coordinate	Between observer and supporting arms and/or multiple firing units		Fires		O		Execution	Tactical
234	Request additional fire support when needed	Basic fire support coordination tasks		Request	When needed	Additional fire support	Support	M	M		Execution	Tactical
235	Establish and maintain FSCMs to aid the rapid engagement of targets and provide safeguards for friendly forces/installations	Basic fire support coordination tasks		Establish	To aid rapid engagement of targets and safeguard friendly forces and installations	Fire support coordination	Measures	M	M		Planning	Operational
236	Establish and maintain FSCMs to aid the rapid engagement of targets and provide safeguards for friendly forces/installations	Basic fire support coordination tasks		Maintain	To aid rapid engagement of targets and safeguard friendly forces and installations	Fire support coordination	Measures	M	M		Planning	Operational
237	Resolve fire support conflicts at lowest possible level	Basic fire support coordination tasks		Resolve	At lowest level possible	Fire support	Conflicts	M	M		Execution	Tactical

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
238	Disseminate information within the FSCC, to other COC staff sections, and to adjacent battalions, supporting artillery units, and higher headquarters, e.g., unit locations, FSCMs, target information, and fire support status reports	Basic fire support coordination tasks		Disseminate	Within the FSCC, to other COC staff sections, and to adjacent battalions, supporting artillery units, and higher headquarter	Unit locations, FSCMs, target information, and fire support status reports	Information	M	M		Execution	Tactical
239	The FSC in the RAOC, augmented by the fire support representatives, coordinates and clears fires missions in the rear area	Rear Area Operations	Rear Area Operations Center	Coordinate		Rear area fire	Missions	M	M		Execution	Tactical
240	The FSC in the RAOC, augmented by the fire support representatives, coordinates and clears fires missions in the rear area	Rear Area Operations	Rear Area Operations Center	clear		Rear area fire	Missions	M	M		Execution	Tactical
241	Establish FSCMs	Rear area operations	Rear area operations center	Establish		Fire support coordination	Measures	M	M		Planning	Operational
242	Plan aviation operations	ACE		Plan		Aviation	Operations		M		Planning	Operational
243	Plan use of the battlespace	ACE		Plan		Battle space	Operations	M			Planning	Operational
244	Plan and coordinate the availability of aircraft, crews, ordnance, fuel, facilities	ACE		Plan		Aircraft, crew, ordnance, fuel, facilities	Availability		M	M	Planning	Operational
245	Plan and coordinate the availability of aircraft, crews, ordnance, fuel, facilities	ACE		Coordinate		Aircraft, crew, ordnance, fuel, facilities	Availability		M	M	Planning	Operational
246	Coordinate Marine aviation with joint and multinational aviation operations and resources	ACE		Coordinate	With joint and multinational aviation operations and resources	Marine	Aviation				Planning	Operational

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
247	Exercise decentralized control of sorties through the MACCS	ACE		Exercise	Through the MACCS	Decentralized sortie	Control		M		Execution	Operational
248	Act as the MAGTF commander's principle Marine aviation advisor	ACE		Advise	As principle Marine aviation advisor	MAGTF	Commander			O	Planning	Operational
249	Advise and assist the MAGTF commander and staff in developing the overall concept for the employment of aviation in support of the MAGTF	ACE		Advise	In developing the overall concept for the employment of aviation in support of the MAGTF	MAGTF	Commander			O	Planning	Operational
250	Advise and assist the MAGTF commander and staff in developing the overall concept for the employment of aviation in support of the MAGTF	ACE		Assist	In developing the overall concept for the employment of aviation in support of the MAGTF	MAGTF	Commander			O	Planning	Operational
251	Coordinate air operations with the GCE and CSSE	ACE		Coordinate	With the GCE and CSSE	Air	Operations	M	M	M	Planning	Operational
252	Coordinate with the naval expeditionary force and joint task force as necessary	ACE		Coordinate with	As necessary	Naval expeditionary and joint task	Force		O		Planning	Operational
253	Articulate commander's intent	ACE		Articulate		Commander's	Intent			M	Planning	Operational
254	As supported main effort identify supporting requirements	ACE		Identify	As supported main effort	Supporting	Requirements				Planning	Operational
255	As supporting effort manage resources to meet main effort requirements	ACE		Manage	As supporting effort, to meet main effort requirements		Resources		O		Planning	Operational

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
256	Ensure the focus of aviation is aligned with MAGTF commander's priorities	ACE		Ensure		Aviation focus and MAGTF commander priority	Alignment				Planning	Operational
257	Develop the MAGTF ATO or air plan and/or Marine input to the joint ATO through the air tasking cycle	ACE		Develop			Plan				Execution	Operational
258	Shape the close-in battlespace	ACE		Shape		Close-in	Battle space	O			Execution	Operational
259	Shape the deep battlespace	ACE		Shape		Deep	Battle space	O			Execution	Operational
260	Establish air superiority	ACE		Establish		Air	Superiority	M			Execution	Operational
261	Employ appropriate mix of sustained and surge ops to control operational tempo and maintain momentum without exhausting assets before mission accomplishment	ACE		Employ	To control operational tempo and maintain momentum without exhausting assets before mission accomplishment	Appropriate mix of sustained and surge	Operations				Execution	Operational
262	Conduct future operations planning via TACC future ops cell	ACE		Conduct	Via TACC future ops cell	Future operations	Planning				Execution	Operational
263	Monitor current operations via TACC current ops cell	ACE		Monitor	Via TACC current ops cell	Current	Operations				Execution	Tactical
264	Provide inputs to larger organization planning cycles, JTF, ATF, MAGTF	ACE		Provide			Input				Planning	Operational
265	Use standard METT-T and MCPP to plan supporting aviation operations	ACE		Plan	Using standard METT-T and MCPP	Supporting aviation	Operations				Planning	Operational
266	Conduct concurrent and parallel planning with MAGTF overall planning	ACE		Conduct			Planning				Planning	Operational
267	Provide input to the fire support plan in the operations order	ACE		Provide			Input				Planning	Operational
268	Develop subordinate plans, airspace control plan (ACP)	ACE		Develop		Subordinate and airspace control	Plan	M			Planning	Operational

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
269	Develop process for producing a daily Air Tasking Order (ATO)	ACE		Develop		Air tasking order producing	Process				Planning	Operational
270	Develop the following plans for the Operations Order:	ACE		Develop		Operations Order	Plan				Planning	Operational
271	Air Defense/Antiair Warfare	ACE		Develop		Air defense/Antiair warfare	Plan				Planning	Operational
272	Offensive Air Support	ACE		Develop		Offensive air support	Plan				Planning	Operational
273	Assault Support	ACE		Develop		Assault support	Plan				Planning	Operational
274	Reconnaissance and Surveillance Plan	ACE		Develop		Reconnaissance and urveillance plan	Plan				Planning	Operational
275	Supplementary Air Operations	ACE		Develop		Supplementary air operations	Plan				Planning	Operational
276	Aircraft Armament	ACE		Develop		Aircraft armament	plan				Planning	Operational
277	Air Control	ACE		Develop		Air Control	plan				Planning	Operational
278	Air Communications	ACE		Develop		Air Communications	plan				Planning	Operational
279	Air Movement Plan/Flight Ferry	ACE		Develop		Air movement plan/ Flight ferry	plan				Planning	Operational
280	Aircraft Schedules	ACE		Develop		Aircraft schedules	plan				Planning	Operational
281	Air Tasking	ACE		Develop		Air Tasking	plan				Planning	Operational
282	Execute the 6 phases of the Air Tasking Cycle	ACE									Execution	Operational
283	1) Provide command aviation guidance, including air apportionment decisions (MAGTF commander)	ACE		Provide		Command aviation (including air apportionment decisions)	guidance				Execution	Operational
284	2) Target/Air Support mission development	ACE									Execution	Operational
285	Provide guidance in the evaluation and selection of aviation targets	ACE		Provide	In evaluation and selection of aviation targets		Guidance				Execution	Operational
286	3) Allocation and allotment	ACE									Execution	Operational

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
287	Translate apportionment decision into total number of sorties available for each operation or task	ACE		Translate	Into total number of sorties available for each operation or task	Apportionment	Decision		M		Execution	Operational
288	Submit allocation requests to the MAGTF commander	ACE		Submit	To MAGTF commander	Allocation	Request		M		Execution	Operational
289	Once allocation approved, sorties are distributed or alloted to the MAGTF elements	ACE		Distribute	To MAGTF elements		Sorties		O		Execution	Operational
290	MAGTF elements then plan & coordinate the integration of sorties into their fire and maneuver efforts. The GCE and CSSE commanders determine the appropriate distribution of these sorties	ACE		Plan		Sortie fire and maneuver efforts	Integration	M	M		Planning	Operational
291	MAGTF elements then plan & coordinate the integration of sorties into their fire and maneuver efforts. The GCE and CSSE commanders determine the appropriate distribution of these sorties	ACE		Coordinate		Sortie fire and maneuver efforts	Integration	M	M		Execution	Operational
292	4) Tasking	ACE									Execution	Operational
293	Translate allocation and allotment decisions into an ATO or air plan and pass tasking along to the units	ACE		Translate	Into an ATO or air plan	Allocation and allotment	Decision		M		Execution	Operational
294	5) Force Execution	ACE									Execution	Operational
295	Aircraft squadrons assign aircrew to aircraft and issue flight schedules	ACE	SQUADRONS	Assign	To aircraft		Aircrew		M	O	Execution	Tactical
296	Aircraft squadrons assign aircrew to aircraft and issue flight schedules	ACE	SQUADRONS	Issue		Flight	Schedules				Execution	Tactical
297	Conduct mission planning and coordination with MAGTF command element, ACE, GCE, and CSSE staffs	ACE		Conduct	With MAGTF CE, ACE, GCE, and CSSE staffs	Mission	Planning			M	Execution	Operational
298	Conduct mission planning and coordination with MAGTF command element, ACE, GCE, and CSSE staffs	ACE		Coordinate with		MAGTF CE, ACE, GSE, and CSSE	Staffs			O	Execution	Operational

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
299	Exercise command and control of aviation forces through MACCS including dynamic retasking of assets to meet a changing situation	ACE		Command	Through the MACCS	Aviation	Forces		O		Execution	Operational
300	Exercise command and control of aviation forces through MACCS including dynamic retasking of assets to meet a changing situation	ACE		Control	Through the MACCS	Aviation	Forces		O		Execution	Operational
301	6) Combat Assessment	ACE									Execution	Operational
302	Provide continuous evaluation of the impact of combat operations to the MAGTF commander	ACE		Evaluate	To the MAGTF commander	Combat operations	Impact			M	Execution	Operational
303	Plan and execute aviation ground support operations conducted by Marine Wing Support Squadron	ACE		Plan		MWSS conducted aviation ground support	Operations				Planning	Tactical
304	Plan and execute aviation ground support operations conducted by Marine Wing Support Squadron	ACE		Execute		MWSS conducted aviation ground support	Operations				Planning	Tactical
305	Plan aviation logistics operations conducted by Marine Aviation Logistic Squadron (MALS)	ACE		Plan		MALS conducted aviation logistics	Operations				Planning	Tactical
306	Execute aviation ground support operations conducted by Marine Wing Support Squadron	ACE		Execute		MWSS conducted aviation ground support	Operations				Execution	Tactical
307	Execute aviation logistics operations conducted by Marine Aviation Logistic Squadron (MALS)	ACE		Execute		MALS conducted aviation logistics	Operations				Execution	Tactical
308	Serve as the command post for the ACE commander and staff	ACE	TACC	Serve as	For the ACE commander and staff	Command	Post		O	M	Execution	Operational
309	Control the execution of deep operations	ACE	TACC	Control		Deep	Operations	M	M		Execution	Operational
310	Integrate, coordinate, and direct air operations in support of the MAGTF	ACE	TACC	Integrate	In support of MAGTF	Air	Operations	M	M		Execution	Operational
311	Integrate, coordinate, and direct air operations in support of the MAGTF	ACE	TACC	Coordinate	In support of MAGTF	Air	Operations	M	M		Execution	Operational
312	Integrate, coordinate, and direct air operations in support of the MAGTF	ACE	TACC	Direct	In support of MAGTF	Air	Operations	M	M		Execution	Operational

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
313	When the ACE is the JFACC, serve as the Joint Air Operations Center	ACE	TACC	Serve as	When the ACE is the JFACC		JAOC			O	Execution	Operational
314	Supervise the DASC	ACE	TACC	Supervise			DASC			O	Execution	Tactical
315	Conduct direction of air operations directly supporting ground forces	ACE	DASC	Direct		Air, directly supporting ground forces	Operations	M	M		Execution	Tactical
316	Process and coordinate requests for immediate air support	ACE	DASC	Process		Immediate air support	Request				Execution	Tactical
317	Process and coordinate requests for immediate air support	ACE	DASC	Coordinate		Immediate air support	Request				Execution	Tactical
318	Coordinate air missions requiring integration with ground forces and other supporting arms	ACE	DASC	Coordinate		Air, integrated with ground forces and other supporting arms	Missions	M	M		Execution	Tactical
319	Manage terminal control assets, FAC(A), ASC(A) in support of ground forces	ACE	DASC	Manage	in support of ground forces	Terminal control, FAC(A), ASC(A)	Assets		O		Execution	Tactical
320	Provide procedural control of assigned aircraft, UAVs, & itinerant aircraft transiting through its assigned area	ACE	DASC	Control	In assigned area	Procedural (of assigned aircraft, UAVs, and itinerant aircraft transitioning though its assigned area)	Aircraft	M	O		Execution	Tactical
321	Command and control a Tactical Air Control Party (TACP)	ACE	DASC	Command			TACP			O	Execution	Tactical
322	Command and control a Tactical Air Control Party (TACP)	ACE	DASC	Control			TACP			O	Execution	Tactical
323	Command and control a Tactical Air Coordinator (airborne) [TAC(A)]	ACE	DASC	Command			TAC(A)			O	Execution	Tactical
324	Command and control a Tactical Air Coordinator (airborne) [TAC(A)]	ACE	DASC	Control			TAC(A)			O	Execution	Tactical
325	Command and control a Forward Air Controller (airborne) [FAC(A)]	ACE	DASC	Command			FAC(A)			O	Execution	Tactical
326	Command and control a Forward Air Controller (airborne) [FAC(A)]	ACE	DASC	Control			FAC(A)			O	Execution	Tactical
327	Command and control a Assault Support Coordinator (airborne) [ASC(A)]	ACE	DASC	Command			ASC(A)			O	Execution	Tactical

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
328	Command and control a Assault Support Coordinator (airborne) [ASC(A)]	ACE	DASC	Control			ASC(A)			O	Execution	Tactical
329	Command and control a Helicopter Support Team [HST]	ACE	DASC	Command		Helicopter Support	Team			O	Execution	Tactical
330	Command and control a Helicopter Support Team [HST]	ACE	DASC	Control		Helicopter Support	Team			O	Execution	Tactical
331	Establish and maintain facilities for liaison and communications between parent units and airspace control agencies	ACE	TACP	Establish	Between parent units and airspace control agencies	Liaison and communications	Facilities		O		Execution	Tactical
332	Establish and maintain facilities for liaison and communications between parent units and airspace control agencies	ACE	TACP	Maintain	Between parent units and airspace control agencies	Liaison and communications	Facilities		O		Execution	Tactical
333	Inform and advise ground unit commander on the employment of supporting aircraft	ACE	TACP	Inform	On employment of supporting aircraft	Ground unit	Commander			O	Execution	Tactical
334	Inform and advise ground unit commander on the employment of supporting aircraft	ACE	TACP	Advise	On employment of supporting aircraft	ground unit	Commander			O	Execution	Tactical
335	Request and control air support	ACE	TACP	Request		Air	Support		M		Execution	Tactical
336	Request and control air support	ACE	TACP	Control		Air	Support	M	M		Execution	Tactical
337	Coordinate the action of combat aircraft engaged in close support of ground or sea forces	ACE	TAC(A)	Coordinate		Combat aircraft engaged in close support of ground or sea forces	action		M		Execution	Tactical
338	Coordinates among TACP, FAC(A) and the fire direction of artillery and naval gunfire	ACE	TAC(A)	Coordinate with	For fire direction of artillery and naval gunfire		TACP			O	Execution	Tactical

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
339	Coordinates among TACP, FAC(A) and the fire direction of artillery and naval gunfire	ACE	TAC(A)	Coordinate with	For fire direction of artillery and naval gunfire		FAC(A)			O	Execution	Tactical
340	Perform air reconnaissance and surveillance	ACE	FAC(A)	Reconnoitre			Airspace	O			Execution	Tactical
341	Perform air reconnaissance and surveillance	ACE	FAC(A)	Surveil			Airspace	O			Execution	Tactical
342	Conduct terminal control of aircraft engaged in offensive air support operations	ACE	FAC(A)	Control		Terminal, of aircraft engaged in offensive air support operations	Aircraft	M	O		Execution	Tactical
343	Control artillery and naval surface fire support missions	ACE	FAC(A)	Control		Artillery and naval surface fire support	Missions	M	M		Execution	Tactical
344	Act as a radio relay	ACE	FAC(A)	Relay		Radio	Communications		M		Execution	Tactical
345	Control landing zone preparations	ACE	FAC(A)	Control		Landing zone	Preparation				Execution	Tactical
346	Coordinate movement of aviation assets during assault support operations	ACE	ASC(A)	Coordinate		Aviation	Assets		O		Execution	Tactical
347	Provide situational awareness to the assault force	ACE	ASC(A)	Provide	To the assault force	Situational	Awareness			M	Execution	Tactical
348	Relays request to the DASC	ACE	ASC(A)	Relay	To the DASC		Request			M	Execution	Tactical
349	Exercise launch authority for immediate and on-call missions	ACE	ASC(A)	Exercise		Launch	Authority				Execution	Tactical
350	Coordinates with the TAC(A)	ACE	ASC(A)	Coordinate with			TAC(A)			O	Execution	Tactical
351	Provides routing recommendations to the air mission commander	ACE	ASC(A)	Provide	To the air mission commander	Routing	Recommendations	M		M	Execution	Tactical
352	Facilitate the landing and movement of helicopter-borne troops, equipment, and supplies in a landing zone	ACE	HST	Facilitate		Helicopter-borne troops, equipment, and supplies in a landing zone	Landing	M	M		Execution	Tactical
353	Facilitate the landing and movement of helicopter-borne troops, equipment, and supplies in a landing zone	ACE	HST	Facilitate		Helicopter-borne troops, equipment, and supplies in a landing zone	Movement	M	M		Execution	Tactical

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
354	Evacuate selected casualties and enemy prisoners of war	ACE	HST	Evacuate		Selected	Casualties		O		Execution	Tactical
355	Evacuate selected casualties and enemy prisoners of war	ACE	HST	Evacuate		Enemy	POWs		O		Execution	Tactical
356	Control and manage airspace	ACE	TAOC	Control			Airspace	O			Execution	Tactical
357	Control and manage airspace	ACE	TAOC	Manage			Airspace	O			Execution	Tactical
358	Detect, identify and control the interception of hostile aircraft and missiles	ACE	TAOC	Detect		Hostile	Aircraft		O		Execution	Tactical
359	Detect, identify and control the interception of hostile aircraft and missiles	ACE	TAOC	Detect		Hostile	Missiles		O		Execution	Tactical
360	Detect, identify and control the interception of hostile aircraft and missiles	ACE	TAOC	Identify		Hostile	Aircraft		O		Execution	Tactical
361	Detect, identify and control the interception of hostile aircraft and missiles	ACE	TAOC	Identify		Hostile	Missiles		O		Execution	Tactical
362	Detect, identify and control the interception of hostile aircraft and missiles	ACE	TAOC	Control		Hostile aircraft and missile	Interception		M		Execution	Tactical
363	Provide direction, positive control, and navigational assistance for friendly aircraft	ACE	TAOC	Direct		Friendly	Aircraft		O		Execution	Tactical
364	Provide direction, positive control, and navigational assistance for friendly aircraft	ACE	TAOC	Control	Positively	Friendly	Aircraft		O		Execution	Tactical
365	Provide direction, positive control, and navigational assistance for friendly aircraft	ACE	TAOC	Provide		Friendly aircraft navigational	Assistance	M	M		Execution	Tactical
366	Collect and display information from its sensors, other Marine Corps sources, and external sources to enhance the ability of the TACC to prosecute the ACE's support of deep operations	ACE	TAOC	Collect	To enhance the ability of the TACC to prosecute the ACE's support of deep operations	Sensor, Marine Corps, external sensor	Information	M	M	M	Execution	Tactical
367	Collect and display information from its sensors, other Marine Corps sources, and external sources to enhance the ability of the TACC to prosecute the ACE's support of deep operations	ACE	TAOC	Display	To enhance the ability of the TACC to prosecute the ACE's support of deep operations	Sensor, Marine Corps, external sensor	Information	M	M	M	Execution	Tactical

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
368	Interface with Air Force air operations center and control and reporting center to coordinate joint air defense efforts	ACE	TAOC	Coordinate	With Air Force air operations center, control, and reporting center	Joint air defense	Efforts			M	Execution	Tactical
369	Manages and coordinates all active defense weapons within assigned sector	ACE	SAAWC	Manage	Within assigned sector	Active defense	Weapons	M	O		Execution	Tactical
370	Manages and coordinates all active defense weapons within assigned sector	ACE	SAAWC	Coordinate	Within assigned sector	Active defense	Weapons	M	O		Execution	Tactical
371	Plan air defense operations	ACE	SAAWC	Plan		Air defense	Operations				Planning	Operational
372	Manage air defense resources	ACE	SAAWC	Manage		Air defense	Resources		O		Execution	Tactical
373	Supervise the employment of air defense assets	ACE	SAAWC	Supervise		Air defense assets	Employment				Execution	Tactical
374	Coordinates with higher and adjacent air agencies and activities	ACE	SAAWC	Coordinate with		higher and adjacent	agencies			O	Execution	Tactical
375	Provide airspace control, management, and surveillance for its designated sector or area of responsibility including Expeditionary Air Fields (AEF) and Forward Operation Bases (FOB)	ACE	Marine air traffic control detachments	Control		Designated sector or AOR, to include AEF and FOB	Airspace	O			Execution	Tactical
376	Provide airspace control, management, and surveillance for its designated sector or area of responsibility including Expeditionary Air Fields (AEF) and Forward Operation Bases (FOB)	ACE	Marine air traffic control detachments	Manage		Designated sector or AOR, to include AEF and FOB	Airspace	O			Execution	Tactical
377	Provide airspace control, management, and surveillance for its designated sector or area of responsibility including Expeditionary Air Fields (AEF) and Forward Operation Bases (FOB)	ACE	Marine air traffic control detachments	Monitor		Designated sector or AOR, to include AEF and FOB	Airspace	O			Execution	Tactical

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
378	Coordinates air defense zones by assisting in the detection of hostile aircraft for LAAD Stinger teams assigned to airbase defense	ACE	Marine air traffic control detachments	Coordinate	By assisting in the detection of hostile aircraft for LAAD Stinger teams assigned to air base defense	Air defense	Zones	O		M	Execution	Tactical
379	Serve as the MAGTF liaison with host-nation, national, and international civil air traffic control agencies	ACE	Marine air traffic control detachments	Serve as	With host-nation, national, and international civil air traffic control agencies	MAGTF	Liaison			M	Execution	Tactical
380	Provide close-in, low-altitude, surface-to-air weapons fires in defense of forward combat elements, vital areas, and installations	ACE	Low Altitude Air Defense	Provide	In defense of forward combat elements, vital areas, and installations	Close-in, low-altitude, surface-to-air weapons	Fires		O		Execution	Tactical
381	Provide surface-to-air weapons support for units engaged in special or independent operations	ACE	Low Altitude Air Defense	Provide	For units engaged in special or independent ops	Surface-to-air weapons	Support		M		Execution	Tactical
382	Provide early warning to other elements of the Marine Air Command and Control System (MACCS)	ACE	Low Altitude Air Defense	Provide	To other elements of the MACCS	Early	Warning			M	Execution	Tactical
383	Responsible for the installation, maintenance, and operation of the ACE commander's communication structure used to direct the efforts of subordinate commanders	ACE	Marine Wing Communications Squadron	Install		ACE commander's communication, used to direct the efforts of subordinate commanders	Structure		O		Execution	Tactical

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
384	Responsible for the installation, maintenance, and operation of the ACE commander's communication structure used to direct the efforts of subordinate commanders	ACE	Marine Wing Communications Squadron	Maintain		ACE commander's communication, used to direct the efforts of subordinate commanders	Structure		O		Execution	Tactical
385	Responsible for the installation, maintenance, and operation of the ACE commander's communication structure used to direct the efforts of subordinate commanders	ACE	Marine Wing Communications Squadron	Operate		ACE commander's communication, used to direct the efforts of subordinate commanders	Structure		O		Execution	Tactical
386	Responsible for the installation, maintenance, and operation of the communication structure that provides connectivity among the sub-elements of the MACCS	ACE	Marine Wing Communications Squadron	Install		Communication, that provides connectivity among the sub-elements of the MACCS	Structure		O		Execution	Tactical
387	Responsible for the installation, maintenance, and operation of the communication structure that provides connectivity among the sub-elements of the MACCS	ACE	Marine Wing Communications Squadron	Maintain		Communication, that provides connectivity among the sub-elements of the MACCS	Structure		O		Execution	Tactical
388	Responsible for the installation, maintenance, and operation of the communication structure that provides connectivity among the sub-elements of the MACCS	ACE	Marine Wing Communications Squadron	Operate		Communication, that provides connectivity among the sub-elements of the MACCS	Structure		O		Execution	Tactical
389	Provide intermediate-level maintenance for aircraft and aeronautical equipment for all supporting units, when authorized perform first degree repair on specific engines	ACE	ACE MALS	Provide	For aircraft and aeronautical equipment for all supporting units	Intermediate-level	Maintenance		M		Execution	Operational
390	Provide aviation supply support for aircraft and Navy-funded equipment to all supporting units	ACE	ACE MALS	Provide	To all supporting units	Aviation supply	Support		M		Execution	Operational
391	Provide Class V(A) ordnance and ammunition logistic support to ACE squadrons to include requisitioning, storage, handling, assembly, transportation, inventory reporting of Class V(A) ammunition, and planning for and operating an ammunition issue point at expeditionary sites	ACE	ACE MALS	Provide	To ACE squadrons	Class V(A) ordnance and ammunition logistic	Support		M	M	Execution	Operational

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
392	Interpret, implement, audit, inspect, and provide oversight for the MAG commanding officer for all policies and procedures relating to the administration and management of operations and maintenance, Navy (less TAD) funds, aviation supply, aircraft maintenance, cryogenics, aircraft ordnance, avionics, and data processing for all units within the MAG and ACE	ACE	ACE MALS	Interpret	For all units within the MAG and ACE	Related to the administration and management of ops and maintenance, Navy funds, aviation supply, aircraft maint, cryogenics, aircraft ordnance, avionics, and data processing	Policies		M	M	Execution	Operational
393	Interpret, implement, audit, inspect, and provide oversight for the MAG commanding officer for all policies and procedures relating to the administration and management of operations and maintenance, Navy (less TAD) funds, aviation supply, aircraft maintenance, cryogenics, aircraft ordnance, avionics, and data processing for all units within the MAG and ACE	ACE	ACE MALS	Interpret	For all units within the MAG and ACE	Related to the administration and management of ops and maintenance, Navy funds, aviation supply, aircraft maint, cryogenics, aircraft ordnance, avionics, and data processing	Procedures		M	M	Execution	Operational
394	Interpret, implement, audit, inspect, and provide oversight for the MAG commanding officer for all policies and procedures relating to the administration and management of operations and maintenance, Navy (less TAD) funds, aviation supply, aircraft maintenance, cryogenics, aircraft ordnance, avionics, and data processing for all units within the MAG and ACE	ACE	ACE MALS	Implement	For all units within the MAG and ACE	Related to the administration and management of ops and maintenance, Navy funds, aviation supply, aircraft maint, cryogenics, aircraft ordnance, avionics, and data processing	Policies		M	M	Execution	Operational
395	Interpret, implement, audit, inspect, and provide oversight for the MAG commanding officer for all policies and procedures relating to the administration and management of operations and maintenance, Navy (less TAD) funds, aviation supply, aircraft maintenance, cryogenics, aircraft ordnance, avionics, and data processing for all units within the MAG and ACE	ACE	ACE MALS	Implement	For all units within the MAG and ACE	Related to the administration and management of ops and maintenance, Navy funds, aviation supply, aircraft maint, cryogenics, aircraft ordnance, avionics, and data processing	Procedures		M	M	Execution	Operational

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
396	Interpret, implement, audit, inspect, and provide oversight for the MAG commanding officer for all policies and procedures relating to the administration and management of operations and maintenance, Navy (less TAD) funds, aviation supply, aircraft maintenance, cryogenics, aircraft ordnance, avionics, and data processing for all units within the MAG and ACE	ACE	ACE MALS	Audit	For all units within the MAG and ACE	Related to the administration and management of ops and maintenance, Navy funds, aviation supply, aircraft maint, cryogenics, aircraft ordnance, avionics, and data processing	Policies		M	M	Execution	Operational
397	Interpret, implement, audit, inspect, and provide oversight for the MAG commanding officer for all policies and procedures relating to the administration and management of operations and maintenance, Navy (less TAD) funds, aviation supply, aircraft maintenance, cryogenics, aircraft ordnance, avionics, and data processing for all units within the MAG and ACE	ACE	ACE MALS	Audit	For all units within the MAG and ACE	Related to the administration and management of ops and maintenance, Navy funds, aviation supply, aircraft maint, cryogenics, aircraft ordnance, avionics, and data processing	Procedures		M	M	Execution	Operational
398	Interpret, implement, audit, inspect, and provide oversight for the MAG commanding officer for all policies and procedures relating to the administration and management of operations and maintenance, Navy (less TAD) funds, aviation supply, aircraft maintenance, cryogenics, aircraft ordnance, avionics, and data processing for all units within the MAG and ACE	ACE	ACE MALS	Inspect	For all units within the MAG and ACE	Related to the administration and management of ops and maintenance, Navy funds, aviation supply, aircraft maint, cryogenics, aircraft ordnance, avionics, and data processing	Policies		M	M	Execution	Operational
399	Interpret, implement, audit, inspect, and provide oversight for the MAG commanding officer for all policies and procedures relating to the administration and management of operations and maintenance, Navy (less TAD) funds, aviation supply, aircraft maintenance, cryogenics, aircraft ordnance, avionics, and data processing for all units within the MAG and ACE	ACE	ACE MALS	Inspect	For all units within the MAG and ACE	Related to the administration and management of ops and maintenance, Navy funds, aviation supply, aircraft maint, cryogenics, aircraft ordnance, avionics, and data processing	Procedures		M	M	Execution	Operational

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
400	Interpret, implement, audit, inspect, and provide oversight for the MAG commanding officer for all policies and procedures relating to the administration and management of operations and maintenance, Navy (less TAD) funds, aviation supply, aircraft maintenance, cryogenics, aircraft ordnance, avionics, and data processing for all units within the MAG and ACE	ACE	ACE MALS	Provide	For the MAG commanding officer	Related to the administration and management of ops and maintenance, Navy funds, aviation supply, aircraft maint, cryogenics, aircraft ordnance, avionics, and data processing for all units within the MAG and ACE	Oversight		M	M	Execution	Operational
401	Interpret, implement, audit, inspect, and provide oversight for the MAG commanding officer for all policies and procedures relating to the administration and management of operations and maintenance, Navy (less TAD) funds, aviation supply, aircraft maintenance, cryogenics, aircraft ordnance, avionics, and data processing for all units within the MAG and ACE	ACE	ACE MALS	Inspect	For all units within the MAG and ACE	Related to the administration and management of ops and maintenance, Navy funds, aviation supply, aircraft maint, cryogenics, aircraft ordnance, avionics, and data processing	Procedures		M	M	Execution	Operational
402	Coordinate with MWSG, MWSS, MACG, and other supporting Navy and Marine Corps activities in planning for the support required to execute aviation logistics	ACE	ACE MALS	Plan	By coordinating with MWSG, MWSS, MACG, and other supporting Navy and Marine Corps activities	Aviation logistics	Support			M	Execution	Operational
403	Screen and inspect nonservicable aeronautical equipment and material for testing and repair, shipment to another repair facility, or disposal	ACE	ACE MALS	Screen	For testing and repair, shipment to another facility, or disposal	Nonserviceable aeronautical	Equipment		O		Execution	Operational

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
404	Screen and inspect nonservicable aeronautical equipment and material for testing and repair, shipment to another repair facility, or disposal	ACE	ACE MALS	Inspect	For testing and repair, shipment to another facility, or disposal	Nonserviceable aeronautical	Equipment		O		Execution	Operational
405	Screen and inspect nonservicable aeronautical equipment and material for testing and repair, shipment to another repair facility, or disposal	ACE	ACE MALS	Screen	For testing and repair, shipment to another facility, or disposal	Nonserviceable aeronautical	Material		O		Execution	Operational
406	Screen and inspect nonservicable aeronautical equipment and material for testing and repair, shipment to another repair facility, or disposal	ACE	ACE MALS	Inspect	For testing and repair, shipment to another facility, or disposal	Nonserviceable aeronautical	Material		O		Execution	Operational
407	Maintain the capability to deploy and provide MASLP support packages as integral units or as tailored aviation logistic elements assigned to another MALS to support aircraft assigned to a host MAG, MALS, or ACE	ACE	ACE MALS	Maintain		Support package deployment	Capability				Execution	Operational
408	Maintain the capability to deploy and provide MASLP support packages as integral units or as tailored aviation logistic elements assigned to another MALS to support aircraft assigned to a host MAG, MALS, or ACE	ACE	ACE MALS	Provide		MASLP support	Package				Execution	Operational
409	Conduct individual and unit training to qualify organic and supported squadron personnel for performance of assigned missions and tasks	ACE	ACE MALS	Conduct	To qualify organic and supported squadron personnel for performance of assigned missions and tasks	Individual and unit	Training				Execution	Operational

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
410	Provide data processing support to facilitate execution of aviation supply, maintenance, and Navy-funded financial functions of the MAG and ACE	ACE	ACE MALS	Provide	To facilitate execution of aviation supply, maintenance, and Navy-funded financial functions of the MAG and ACE	Data processing	Support				Execution	Operational
411	Provide aviation ground support and Combat Service Support (CSS) functions for airfield operations	ACE	MWSS	Provide	For airfield operations	Aviation ground and combat service	Support				Execution	Operational
412	Specific services include EAF, explosive ordnance disposal, weather services, military police support, engineering support, materials handling equipment, motor transportation, intra-airfield communication, aircraft rescue and fire fighting, utilities support and maintenance, field messing, medical support, and aircraft ground vehicle refueling	ACE	MWSS								Execution	Operational
413	Perform camp commandant functions	ACE	MWSS	Perform		Camp commandant	Functions			M	Execution	Tactical
414	Provice nucleus for rear area security and air base defense	ACE	MWSS	Provide		Rear area security and air base defense	Nucleus	M			Execution	Tactical
415	Transport fuel, ordnance, other supplies required by the ACE from the point of entry in the MAGTF area of operations to the EAF site for distribution by a MWSS and/or MALS	ACE	Combat Service Support Detachment	Transport	From MAGTF point of entry to EAF site for distribution bay MWSS and/or MALS	ACE required (fuel, ordnance, other)	Supplies	M	O		Execution	Tactical

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
416	Perform third echelon maintenance on engineer, motor transport, and communications equipment that is supported by the Marine Corps and operated by the ACE	ACE	Combat Service Support Detachment	Maintain	On engineer, motor transport, and communications equipment that is supported by the Marine Corps and operated by the ACE	Third echelon	Equipment	M	O		Execution	Operational
417	Provide postal, disbursing, exchange, legal, civil affairs, and graves registration services	ACE	Combat Service Support Detachment	Provide		Postal, disbursing, exchange, legal, civil affairs, graves registration	Services				Execution	Tactical
418	Provide supply, general engineering, health services, and other support that cannot be satisfied by a MWSS	ACE	Combat Service Support Detachment	Provide		Non-MWSS (supply, general engineering, health services, other)	Support				Execution	Tactical
419	Define the logistics main effort	MEF or MLC		Define		Logistics	Effort				Planning	Operational
420	Identify force logistics support requirements	MEF or MLC		Identify		Force logistics support	Requirements				Planning	Operational
421	Coordinate and supervise force closure and onward movement	MEF or MLC		Coordinate		Onward	Movement				Execution	Operational
422	Coordinate and supervise force closure and onward movement	MEF or MLC		Supervise		Onward	Movement				Execution	Operational
423	Coordinate and supervise force closure and onward movement	MEF or MLC		Coordinate		Force	Closure		M		Execution	Operational
424	Coordinate and supervise force closure and onward movement	MEF or MLC		Supervise		Force	closure		M		Execution	Operational
425	Organize logistic support through the communication zone	MEF or MLC		Organize	Through the communication zone	Logistic	Support	M			Execution	Operational
426	Link strategic sustainment to tactical combat service support	MEF or MLC		Link		Strategic sustainment and tactical combat service	Support				Execution	Operational

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
427	Develop agreements with other component commanders and participate in component command-level working groups	MEF or MLC		Develop	With other component commanders		Agreements			M	Planning	Operational
428	Develop agreements with other component commanders and participate in component command-level working groups	MEF or MLC		Participate in		Component command-level working	Groups			O	Planning	Operational
429	Continuously refine force personnel, sustainment, transportation, and reception requirements	MEF or MLC		Refine	Continuously	Personnel, sustainment, transportation, reception	Requirements			M	Execution	Operational
430	Use METT -T to define operational and tactical logistics requirements for each operation	MEF or MLC		Define	Using METT-T	Operational and tactical logistics	Requirements				Planning	Operational
431	Identify the best set of tactical assets to add to a MAGTF for operational logistics purposes	MEF or MLC		Identify		Optimal additional MAGTF operational logistics	Assets		O		Planning	Operational
432	Inform the JFC of changes in logistics requirements that might affect Marine Corps' operations	MEF or MLC		Inform	Of changes in logistics requirements that might affect Marine Corps' operations		JFC			O	Planning	Operational
433	Source Marine forces requirements from the Marine Corps, other Service components, joint, host nation support, or multinational agencies	MEF or MLC		Source	From the Marine Corps, other Service components, joint, host nation support, or multinational agencies	Marine forces	Requirements			M	Planning	Operational
434	Allocate intratheater transportation asset	MEF or MLC		Allocate		Intratheater transportation	assets	M	O		Execution	Operational
435	Develop theater facilities	MEF or MLC		Develop		Theater	Facilities	M	O		Execution	Operational

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
436	Initiate acquisition cross servicing agreements to fill MAGTF requirements and coordinate HNS	MEF or MLC		Initiate		MAGTF requirement filling, acquisition cross servicing	Agreements				Execution	Operational
437	Initiate acquisition cross servicing agreements to fill MAGTF requirements and coordinate HNS	MEF or MLC		Coordinate		Host nation	Support	M			Execution	Operational
438	Coordinate Marine forces contingency contracting with JFC chief of contracting	MEF or MLC		Coordinate	With JFC chief of contracting	Marine force contingency	Contracting			M	Execution	Operational
439	Coordinate and integrate health service support in the theater of war with the Joint Force Surgeon or senior medical regulating authority	MEF or MLC		Coordinate	With the Joint Force Surgeon or senior medical regulating authority	Theater of war health service	Support			M	Execution	Operational
440	Coordinate and integrate health service support in the theater of war with the Joint Force Surgeon or senior medical regulating authority	MEF or MLC		Integrate	With the Joint Force Surgeon or senior medical regulating authority	Theater of war health service	Support			M	Execution	Operational
441	Coordinate and supervise reconstitution and redeployment	MEF or MLC		Coordinate			Reconstitution				Execution	Operational
442	Coordinate and supervise reconstitution and redeployment	MEF or MLC		Coordinate			Redeployment				Execution	Operational
443	Coordinate and supervise reconstitution and redeployment	MEF or MLC		Supervise			Reconstitution				Execution	Operational
444	Coordinate and supervise reconstitution and redeployment	MEF or MLC		Supervise			Redeployment				Execution	Operational
445	Ensure the effectiveness and economy of Marine Corps operational level logistics	MEF or MLC		Ensure		Marine Corps operational level logistics	Effectiveness				Execution	Operational
446	Ensure the effectiveness and economy of Marine Corps operational level logistics	MEF or MLC		Ensure		Marine Corps operational level logistics	Economy				Execution	Operational

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
447	Employ combat service support detachments (CSSDs) in direct support role to the GCE maneuver elements and ACE units for capabilities which exceed the MWSS	FSSG	CSSE	Employ	In direct support role to the GCE maneuver elements and ACE units for capabilities which exceed the MWSS	Combat service support	Detachments		O		Execution	Tactical
448	Develop sequels to plans that anticipate the growth of the CSSE task-organization as the theater develops	FSSG	CSSE	Develop		Sequential, that anticipate the growth of the CSSE task-organization as the theatre develops	Plans				Planning	Operational
449	Integrate logistic requirements with existing plans and annexes	FSSG	CSSE	Integrate	With existing plans and annexes	Logistics	Requirements				Planning	Operational
450	Determine basic, broad mobilization, deployment, and sustainment requirements	FSSG	CSSE	Determine		Basic, broad mobilization, deployment, and sustainment	Requirements				Planning	Operational
451	Determine theater organization and conduct Logistic Preparation of the Theater	FSSG	CSSE	Determine		Theater	Organization	M			Planning	Operational
452	Determine theater organization and conduct Logistic Preparation of the Theater	FSSG	CSSE	Conduct		Logistic, of the Theater	Preparation	M			Planning	Operational
453	Consider battlespace geometry, real estate requirements, movement control and their impact on logistics bottlenecks	FSSG	CSSE	Consider		Battlespace geometry, real estate requirements, movement control on logistics bottlenecks	Impact	M			Planning	Operational
454	Determine critical and vital supplies	FSSG	CSSE	Determine		Critical and vital	Supplies		O		Planning	Operational
455	Apportion and allocate resources	FSSG	CSSE	Allocate			Resources		O		Planning	Operational
456	Apply “Single Battle Approach”: “Those who employ our forces will plan for and execute deployment of our forces	“FSSG	CSSE	Apply		Single battle	Approach				Planning	Operational

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
457	Provide instruction or guidance for redistributing assets from low-to-high priority organizations within the command	FSSG	CSSE	Provide		Asset redistributing (from low-to-high priority organizations within the command)	Instruction				Planning	Operational
458	Provide instruction or guidance for redistributing assets from low-to-high priority organizations within the command	FSSG	CSSE	Provide		Asset redistributing (from low-to-high priority organizations within the command)	Guidance				Planning	Operational
459	Source known requirements and anticipate unidentified requirements	FSSG	CSSE	Source		Known	Requirements				Planning	Operational
460	Source known requirements and anticipate unidentified requirements	FSSG	CSSE	Anticipate		Unidentified	Requirements				Planning	Operational
461	Determine size and location of logistic facilities and units	FSSG	CSSE	Determine		Logistic facilities and units	Size		M		Planning	Operational
462	Determine size and location of logistic facilities and units	FSSG	CSSE	Determine		Logistic facilities and units	Location	O			Planning	Operational
463	Provide efficient means to retrograde, repair, and redistribute critical items	FSSG	CSSE	Provide		Efficient critical item retrograde, repair and redistribution	Means				Planning	Operational
464	Apply Force Deployment Planning and Execution (FDP&E) operational procedures	FSSG	CSSE	Apply		Force Deployment Planning and Execution operational	Procedures				Planning	Operational
465	Determine how to accomplish the employment mission	FSSG	CSSE	Determine		To accomplish employment mission	Plan				Planning	Operational
466	Determine the force and sustainment requirements to accomplish the employment mission	FSSG	CSSE	Determine		Employment mission accomplishing force and sustainment	Requirements				Planning	Operational
467	Source force and sustainment requirements	FSSG	CSSE	Source		Force and sustainment	Requirements		M		Planning	Operational
468	Determine a phased deployment plan and correct all force and sustainment information on the TPFDD	FSSG	CSSE	Determine		Phased deployment	Plan				Planning	Operational

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
469	Determine a phased deployment plan and correct all force and sustainment information on the TPFDD	FSSG	CSSE	Correct		TPFDD force and sustainment	Information				Planning	Operational
470	Use the TPFDD as a command and control tool for the execution of deployment, force closure, and sustainment operations	FSSG	CSSE	Execute	Using the TPFDD as a command and control tool	Deployment, force closure, sustainment	Operations				Execution	Operational
471	Develop the concept of logistics outlining the intent of how to support and integrate with concept of operations to include a description of the organization and positioning of operational logistics assets, planned employment of other Service and nation logistic/combat service support forces, HNS logistic capabilities and/or LOC operations	FSSG	CSSE	Develop		Logistics	Concept				Planning	Operational
472	Develop logistics related intelligence requirements, IPB (study of roads, rails, bridges, tunnels, forts, choke points, ports, airfields, and infrastructure)	FSSG	CSSE	Develop		Logistics related intelligence, IPB	Requirements				Planning	Operational
473	Develop environmental information requirements (IRS)	FSSG	CSSE	Develop		Environmental information	Requirements				Planning	Operational
474	Develop threat information requirements (IRS)	FSSG	CSSE	Develop		Threat information	Requirements				Planning	Operational
475	Develop process for CSSE observations to be fed back into the intelligence cells	FSSG	CSSE	Develop	For CSSE observations to be fed back into the intelligence cells		Process			M	Planning	Operational
476	Identify, evaluate, and determine host nation sources of supplies and services to be used during the operation	FSSG	CSSE	Identify		Host nation, supplies and services (to be used during the operation)	Sources	M	O		Planning	Operational
477	Identify, evaluate, and determine host nation sources of supplies and services to be used during the operation	FSSG	CSSE	Evaluate		Host nation, supplies and services (to be used during the operation)	Sources	M	O		Planning	Operational

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
478	Identify, evaluate, and determine host nation sources of supplies and services to be used during the operation	FSSG	CSSE	Determine		Host nation, supplies and services (to be used during the operation)	Sources	M	O		Planning	Operational
479	Establish a contingency contracting capability (in country resources, ICR) to offset logistic shortfalls that occur early in the deployment of the force to theater	FSSG	CSSE	Establish		Contingency contracting, to offset logistic shortfalls that occur early in the deployment of the force to theater	Capability				Execution	Operational
480	Develop a logistics/Combat Service Support Estimate to evaluate COAs based on force closure, sustainment, and reconstitution and redeployment	FSSG	CSSE	Develop		Logistics/CSS, to evaluate COAs based on force closure, sustainment, and reconstitution and redeployment	Estimate				Planning	Operational
481	Continue to refine the logistics/Combat Service Support Estimate through out the planning process	FSSG	CSSE	Refine	Through out the planning process	Logistics/CSS	Estimate				Planning	Operational
482	Develop the concept of logistics for the the OPPLAN/OPORD include sustainment priorities and resources, base development and other civil engineering requirements, HNS and inter-service responsibilities, Identify the priority and movement of major logistics items for each option and phase of the concept of logistics and lists strategic and theater ports of resupply	FSSG	CSSE	Develop		OPPLAN/OPORD logistics	Concept				Planning	Operational
483	Develop appropriate OPORD annexes	FSSG	CSSE	Develop							Planning	Operational
484	Control arrival and assembly operations through a network of subordinate control organizations	FSSG	Arrival & assembly operations group	Control	Through a network of subordinate control organizations	Arrival and assembly	Operations	M	M	M	Execution	Operational
485	Control throughput of personnel and maritime propositioning equipment and supplies at theater ports, beaches, and airfields through POG, BOG, A/DACG, MCC	FSSG	Landing Force Support Party (LFSP)	Control	Through POG, BOG, A/DACG, MCC	Theater ports, beaches, and airfields personnel, MPE/S	Throughput				Execution	Operational

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
486	Prepare the port before the arrival of MPF, unload ships, and control the throughput of supplies and equipment after they are off-loaded	FSSG	Port operations group	Prepare	Before MPF arrival		port	O	O		Execution	Operational
487	Prepare the port before the arrival of MPF, unload ships, and control the throughput of supplies and equipment after they are off-loaded	FSSG	Port operations group	Unload			Ships		O		Execution	Operational
488	Prepare the port before the arrival of MPF, unload ships, and control the throughput of supplies and equipment after they are off-loaded	FSSG	Port operations group	Control		Off-loaded supplies and equipment	Throughput		M		Execution	Operational
489	Prepare the beach before the arrival of the MPSRON and control the throughput of supplies and equipment after they are off-loaded	FSSG	Port operations group	Prepare	before MPSRON arrival		Beach	O		M	Execution	Operational
490	Prepare the beach before the arrival of the MPSRON and control the throughput of supplies and equipment after they are off-loaded	FSSG	Port operations group	Control		Off-loaded supplies and equipment	Throughput				Execution	Operational
491	Control and coordinate the off load of airfield units and equipment	FSSG	Arrival airfield control group	Control		Airfield units and equipment	Off load	M	M		Execution	Operational
492	Provide limited combat service support to airfield units	FSSG	Arrival airfield control group	Provide	to airfield units	Limited combat service	Support				Execution	Operational
493	Plans, routes, schedules, and controls personnel and equipment movements over LOCS	FSSG	Movement control center	Plan		Personnel and equipment over LOCS	Movement	M	M		Planning	Operational
494	Plans, routes, schedules, and controls personnel and equipment movements over LOCS	FSSG	Movement control center	Route		Personnel and equipment over LOCS	Movement	M	M		Execution	Operational
495	Plans, routes, schedules, and controls personnel and equipment movements over LOCS	FSSG	Movement control center	Schedule		Personnel and equipment over LOCS	Movement	M	M		Execution	Operational
496	Plans, routes, schedules, and controls personnel and equipment movements over LOCS	FSSG	Movement control center	Control		Personnel and equipment over LOCS	Movement	M	M		Execution	Operational

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
497	Control MPF ops, form convoys containing MPE/S and personnel at ports, airfields, and/or beaches and dispatches them to the AAOEs	FSSG	Movement control center	Form		MPE/S and personnel, at ports, airfields, and/or beached	Convoy	M	M		Execution	Operational
498	Control MPF ops, form convoys containing MPE/S and personnel at ports, airfields, and/or beaches and dispatches them to the AAOEs	FSSG	Movement control center	Dispatch	To the AAOEs	MPE/S and personnel, at ports, airfields, and/or beached	Convoy	M	M		Execution	Operational
499	Control MPF ops, form convoys containing MPE/S and personnel at ports, airfields, and/or beaches and dispatches them to the AAOEs	FSSG	Movement control center	Control	To the AAOEs	MPF	Movement	M	M		Execution	Operational
500	Receive MPE/S and distributes the equipment to the units of the MAGTF	FSSG	Arrival and assembly operations element	Receive		Maritime pre-positioning	Equipment		O		Execution	Operational
501	Receive MPE/S and distributes the equipment to the units of the MAGTF	FSSG	Arrival and assembly operations element	Receive		Maritime pre-positioning	Supplies		O		Execution	Operational
502	Receive MPE/S and distributes the equipment to the units of the MAGTF	FSSG	Arrival and assembly operations element	Distribute	To the units of the MAGTF		Equipment		O	M	Execution	Operational
503	Deploy early and in echelons to establish forward base for sustained operations	FSSG	Deployment	Establish	By deploying early and in echelons	Forward, sustained operations	Base	M	O		Execution	Operational
504	Establish and operate POG, BOG, A/DACG, MCC	FSSG	Force closure ops	Establish		Port operations, beach operations, airfield control	Groups	M	O		Execution	Operational
505	Establish and operate POG, BOG, A/DACG, MCC	FSSG	Force closure ops	Establish		Movement/mobility control	Center	M	O		Execution	Operational
506	Establish and operate POG, BOG, A/DACG, MCC	FSSG	Force closure ops	Operate		Port operations, beach operations, airfield control	Groups	M	O		Execution	Operational
507	Establish and operate POG, BOG, A/DACG, MCC	FSSG	Force closure ops	Operate		Port operations, beach operations, airfield control	Groups	M	O		Execution	Operational

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
508	MLC supply personnel receive store and prepare the MEF accompanying supplies for movement to the combat zone	FSSG	Sustainment	receive	For movement to the combat zone	MEF	Supplies		O		Execution	Operational
509	MLC supply personnel receive store and prepare the MEF accompanying supplies for movement to the combat zone	FSSG	Sustainment	Store	For movement to the combat zone	MEF	Supplies		O		Execution	Operational
510	MLC supply personnel receive store and prepare the MEF accompanying supplies for movement to the combat zone	FSSG	Sustainment	Prepare	For movement to the combat zone	MEF	Supplies		O		Execution	Operational
511	Move cargo to combat service support areas	FSSG	Sustainment	Move	To combat service support areas		Cargo		O		Execution	Operational
512	Establish combat service support areas	FSSG	Sustainment	Establish		Combat service support	Areas	O			Execution	Operational
513	Integrate MARFOR activities and requirements with joint agencies, e.g. JRSOI and JMC	FSSG	Sustainment	Integrate	With joint agencies (e.g. JRSOI and JMC)	MARFOR	Activities			M	Execution	Operational
514	Integrate MARFOR activities and requirements with joint agencies, e.g. JRSOI and JMC	FSSG	Sustainment	Integrate	With joint agencies (e.g. JRSOI and JMC)	MARFOR	Requirements			M	Execution	Operational
515	Develop replenishment and redeployment plans during the employment phase of expeditionary operations	FSSG	Replenishment & Redeployment	Develop	During the employment phase of expeditionary operations	Replenishment and redeployment	Plans			M	Planning	Operational
516	Determine MAGTF resource requirements	FSSG	Replenishment & Redeployment	Determine		MAGTF resource	Requirements				Planning	Operational

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
517	Coordinate Marine Corps requirements with joint, host nation, and strategic logistics support agencies	FSSG	Replenishment & Redeployment	Coordinate	With joint, host nation, and strategic logistics support agencies	Marine Corps	Requirements			M	Planning	Operational
518	Synchronize the recovery of the MAGTF from the combat zone with the tactical situation	FSSG	Replenishment & Redeployment	Synchronize	From the combat zone, with tactical situation	MAGTF	Recovery			M	Execution	Tactical
519	Synchronize replenishment and redeployment operations with arrival of MPF and/or other shipping and strategic aircraft	FSSG	Replenishment & Redeployment	Synchronize	With arrival of MPF and/pr other shipping and strategic aircraft	Replenishment and redeployment	Operations	M	M	M	Execution	Operational
520	Establish maintenance areas, parking, and staging areas and warehousing	FSSG	Replenishment & Redeployment	Establish		Maintenance, parking, staging, and warehousing	Areas	O	M		Execution	Tactical
521	Designate, organize, and establish procedures for wash down sites	FSSG	Replenishment & Redeployment	Designate		Wash down site	Procedures				Planning	Tactical
522	Designate, organize, and establish procedures for wash down sites	FSSG	Replenishment & Redeployment	Organize		Wash down site	Procedures				Planning	Tactical
523	Designate, organize, and establish procedures for wash down sites	FSSG	Replenishment & Redeployment	Establish		Wash down site	Procedures				Planning	Tactical
524	Stage shipping containers, original packaging, and dunnage for MPF regeneration	FSSG	Replenishment & Redeployment								Execution	Tactical

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
525	Arrange customs, agricultural, and other pre-redeployment inspections	FSSG	Replenishment & Redeployment	Arrange		Customs, agricultural, and other pre-deployment	Inspections				Planning	Tactical
526	Maintain the continuity of operations between MPF regeneration and other replenishment and redeployment operations	FSSG	Replenishment & Redeployment	Maintain		Operational (between MPF regeneration and other replenishment and redeployment operations)	Continuity				Execution	Tactical
527	Serve as an information processing agency to keep MARFOR commander informed of subordinate unit deployments	FSSG	Replenishment & Redeployment	process	To keep MARFOR commander informed of subordinate unit deployments		Information				Execution	Operational
528	Serve as an information processing agency to keep MARFOR commander informed of subordinate unit deployments	FSSG	Replenishment & Redeployment	process	To keep MARFOR commander informed of subordinate unit deployments		Information				Execution	Operational
529	Coordinate with TRANSCOM on transportation requirements, priorities, and allocations, as required	FSSG	Replenishment & Redeployment	Coordinate with	As required	Transportation requirements, priorities, and allocations	TRANSCOM			O	Execution	Operational
530	Coordinate with TRANSCOM via JTC JMC in joint operations	FSSG	Replenishment & Redeployment	Coordinate with	Via JTC JMC in joint operations	Joint	TRANSCOM			O	Execution	Operational
531	Establish priorities and sequence for the deployment of MAGTF personnel, equipment, and supplies to meet operational objectives	FSSG	Replenishment & Redeployment	Establish	To meet operational objectives	MAGTF personnel, equipment, supplies deployment	Priorities		M		Planning	Operational
532	Establish priorities and sequence for the deployment of MAGTF personnel, equipment, and supplies to meet operational objectives	FSSG	Replenishment & Redeployment	Establish	To meet operational objectives	MAGTF personnel, equipment, supplies deployment	Sequence	O	M		Planning	Operational

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
533	Identify locations and times subordinate units must in place at ports of embarkation, ports of debarkations, and final destinations	FSSG	Replenishment & Redeployment	Identify		Subordinate unit ports of embarkation, ports of debarkation, and final destinations	Location	O			Planning	Operational
534	Identify locations and times subordinate units must in place at ports of embarkation, ports of debarkations, and final destinations	FSSG	Replenishment & Redeployment	Identify		Subordinate unit ports of embarkation, ports of debarkation, and final destinations	Time	O			Planning	Operational
2015 1	Plan assaults, raids, feints, security operations (2015)	CE		Plan			Operations				Planning	Operational
2015 2	Direct assaults, raids, feints, security operations, movement of sea base, split sea base ops, relief of USA units (2015)	CE		Direct			Operations				Execution	Operational
2015 3	Allocate resources (2015)	CE		Allocate			Resources				Execution	Operational
2015 4	Coordinate simultaneous Bn assaults (2015)	CE		Coordinate		Simultaneous Bn	Assaults				Execution	Tactical
2015 5	Coordinate with maneuver elements ashore, higher HQ (2015)	CE		Coordinate with			Units				Execution	Operational
2015 5.1	Coordinate with maneuver elements ashore, higher HQ (2015)	CE		Coordinate with			HQs				Execution	Operational
2015 6	Coordinate with sea based support elements (2015)	CE		Coordinate with		Support	Forces				Execution	Operational
2015 7	Pass control to USA (2015)	CE		Transfer			Control				Execution	Tactical
2015 8	Operate from sea base (2015)	CE		Operate from			Sea base				Execution	Tactical
2015 9	Support assaults, raids, return to sea base with vertical lift (2015)	ACE		Support			Operations				Execution	Tactical
2015 10	Conduct preemptive air strikes (2015)	ACE		Conduct			Strikes				Execution	Tactical
2015 11	Conduct tactics air support (2015)	ACE		Conduct		Air	Support				Execution	Tactical
2015 12	Coordinate with SOF ashore, sea base and maneuver elements ashore (2015)	ACE		Coordinate with			Units				Execution	Tactical

Table 12. Parsed MEB responsibilities (continued)

Index	Integration responsibilities	MAGTF element	Section	Verb	Verb modifier	Obj modifier	Object	Battle space	Assets	People	Phase	Level of War
2015 12.1	Operate from sea base (2015)	ACE		Operate from			Sea base				Execution	Tactical
2015 13	Provide mobile CSS dets to maneuver elements (2015)	CSSE		Provide		Mobile CSS	Detach-ments				Execution	Tactical
2015 14	Support maneuver elements, support USA units (2015)	CSSE		support		Maneuver	Units				Execution	Tactical
2015 15	operate from sea base (2015)	CSSE		Operate from			Sea base				Execution	Tactical
2015 16	Coordinate with sea base and maneuver elements ashore (2015)	CSSE		Coordi-nate with			Units				Execution	Tactical
201 5 17	Conduct single and dual Bn assaults (2015)	GCE	Bn	Conduct		Single and dual Bn	Assaults				Execution	Tactical
2015 18	Conduct air, surface, and vertical assaults, raids, feints, unit relief, and link-up (2015)	GCE	Bn	Conduct			Opera-tions				Execution	Tactical
2015 19	Assault inland and mountainous objectives (2015)	GCE	Bn	Assault			Objectives				Execution	Tactical
2015 20	Seize and secure ports, port cities, airfields (2015)	GCE	Bn	Seize			Objectives				Execution	Tactical
2015 20.1	Seize and secure ports, port cities, airfields (2015)	GCE	Bn	Secure			Objectives				Execution	Tactical
2015 21	Serve reserve force (2015)	GCE	Bn	Maneuver			Ashore				Execution	Tactical
2015 22.1	Coordinate with sea base and Bns (2015)	GCE	Bn	Coordi-nate with		Maneuver	Units				Execution	Tactical
2015 22.2	Coordinate with sea base and Bns (2015)	GCE	Bn	Coordi-nate with		Maneuver	Sea base				Execution	Tactical
2015 22.3	Operate from sea base (2015)	GCE	Bn	Operate from			Sea base				Execution	Tactical

Appendix B

Table 13 lists the guidance statements that our analysis of table 12, appendix A showed required a particular asset or action to be included in the training environment. The table also indicates if the environmental requirement supports CE, GCE, ACE, or CSSE.

Table 13. Environmental requirements and the supported training actions

Environmental requirement	Supported actions (C)=CE (G)=GCE (A)=ACE (S)=(CSSE)
Air defense assets	Manage and coordinate air defense weapons (A) Provide fires for forward combat elements, special ops, vital areas, and installations (A) Coordinate detection in zones (A) Manage air defense weapons(A)
Air routes	Recommend air routing (A)
Air sector	Monitor manage and control sector to include AOR, AEC, FOB(A)
Air support assets	Prioritize, prepare, forward, coordinate air support requests (G) Request and control air support (A)
Aviation assets	Keep as direct support (C) Command and control, maintain, provide logistics, assess serviceability (A) Coordinate (A)
Battlespace	Develop missions (C) Recommend joint airspace changes (C), consider impact on logistics (S) Coordinate terrain management (C)
Communications	Relay communications (A)
Communications structure	Establish and maintain liaison and comms facilities (G) Establish and maintain liaison and comms facilities (A) Install, maintain, operate structure to communicate to direct subordinates (A) Operate FSC nets (G) Establish and maintain liaison and comms facilities (G)
Data systems	Maintain target and situation maps (G) Maintain target data (G)
Engagement areas	Finalize engagement areas (G)
Fire control areas	Determine FSCMs (C), establish and maintain FSCMs (A) Establish and plan FSCMs (G) Finalize FSCMs (G) Disseminate fires info on unit loc, target info, FSCMs (G)

Table 13. Environmental requirements and the supported training actions (continued)

Environmental requirement	Supported actions (C)=CE (G)=GCE (A)=ACE (S)=(CSSE)
Fire support assets	Coordinate (G); coordinate fires between supporting arms (G)
	Coordinate positioning (G)
	Coordinate air missions integrated with ground and supporting arms (A)
	Allocate attack assets (G)
	Allocate fire support assets to Bns (CAS, NSFS…) (G)
	Coordinate employment (G)
	Coordinate Co maneuver scheme with supporting arms (G)
Fire support operations	Plan, integrate, coordinate current and future Rn scheme of maneuver (G)
	Translate data into capabilities (G), integrate with ground maneuver (A)
	Make and monitor allocations (G), integrate air fires with maneuver (A)
	Plan and coordinate (G)
	Conduct fire support (G)
Fires	Obtain info and intell from fire support missions (G)
	Deliver fires on detected targets (G)
	Clear fire request (G)
	Integrate, coordinate fires to support scheme of maneuver (G)
	Request additional FS when needed (G)
	Resolve conflicts at lowest level (G)
	Coordinate specialized munitions delivery (G)
	Plan and coordinate Co fires (G)
	Control artillery and NSFS missions (A)
	Coordinate and clear rear area fire missions (G)
	Plan, request (G)
	Monitor clearance (G)
	Coordinate (G)
	Call for and adjust arty, NSFS, mortar fires (G)

Table 13. Environmental requirements and the supported training actions (continued)

Environmental requirement	Supported actions (C)=CE (G)=GCE (A)=ACE (S)=(CSSE)
Friendly aircraft	Assign aircrew to aircraft (A) Coordinate and direct air supporting ground ops (A) Coordinate air missions integrated with ground and supporting arms (A) Coordinate aircraft actions (A) Provide terminal control of aircraft supporting offensive ops (A) Transport ACE supplies from MAGTF point of entry to EAF (A) Exercise procedural control of transiting aircraft (A) Control and manage (A) Intercept hostile missiles and aircraft (A) Direct, positively control and provide navigation assistance for friendly aircraft (A) Transport ACE supplies from MAGTF point of entry to EAF (A)
Future events	Plan next mission (C), plan branches and sequels (C), plan next battle (C), determine deployment sequence (S)
Hostile aircraft	Detect, identify, and intercept (A)
Hostile missiles	Detect, identify, and intercept (A)
Joint Force	Coordinate with Joint Forces (A)
Log facilities	Determine location and size S) Develop (S), establish mobility control centers (S) Establish forward bases (S) Establish combat support area (S) Plan embarkation points location and time (S) Establish maintenance, parking, staging and warehousing areas (S)
Log movement	Convoy MPE/S and personnel l (S), unload ships (S) Control offload (S) Plan, route, schedule, control (S)
Log sources, assets and supplies	Identify, determine critical and vital, plan LOC movement (S), source requirements (S) Control offloaded throughput (S), distribute equipment (S) Determine, identify, and evaluate (S); coordinate support (S) Receive and store supplies (S)

Table 13. Environmental requirements and the supported training actions (continued)

Environmental requirement	Supported actions (C)=CE (G)=GCE (A)=ACE (S)=(CSSE)
Log support forces	Organize, prepare log elements (S) Coordinate and supervise closure (S), allocate intratheater transport (S), control MPF movements (S) Prep for MPF arrival (S), control log control groups (S) Prep for MPSRON arrival (S), control log control groups (S) Form and dispatch convoys (S), operate log control groups (S) Employ CSSE dets in direct support to GCE maneuver elements and ACE units (S)
Maneuver areas	Establish triggers (G) Finalize triggers (G)
Maneuver elements	Plan, integrate, coordinate arms supporting current and future Rn scheme of maneuver (G) Integrate air fires with maneuver (A) Conduct fire support (G) Identify embarkation location and time (S) Integrate, coordinate fires to support scheme of maneuver (G) Disseminate fires info on unit loc, target info, FSCMs (G) Evacuate casualties (A) Facilitate landing and movement (A) Provide rear area security and air defense (A) Coordinate ME with supporting arms (G)
Observers	Coordinate fires between supporting arms (G) Coordinate observation coverage (G)
Operations	Plan air ops (A), coordinate air ops with GCE and CSSE (A), integrate air fires with ground ops (A) Monitor (C) Control air operations (A) Monitor (C)

Table 13. Environmental requirements and the supported training actions (continued)

Environmental requirement	Supported actions (C)=CE (G)=GCE (A)=ACE (S)=(CSSE)
Resources	Reallocate for COAs (C), develop future intell asset placement (G), determine deployment sequence and priorities (S)
	Request (G), redirect, integrate, synchronize (C), identify R&S requirements (C), plan, coordinate, and Manage supporting assets (A)
	Monitor status of forces and materials (C), assess nonorganic intell assets (G)
	Facilitate landing and movement equipment (A)
	Facilitate landing and movement of supplies (A)
	Collect and display sensor info (A)
	Perform targeting process (G)
	Transport ACE supplies from MAGTF point of entry to EAF (A)
	Reconnoitre and surveil airspace (A)
	Transport ACE supplies from MAGTF point of entry to EAF (A)
Sorties	Discuss excess with JFC (C)
	Recommend apportionment (C), request, distribute, control (A)
Targets	Develop future targets (G)
	Develop list, recommend, acquire, prioritize (G); find, track, engage (G)
	Finalize high priority target acquisition, tracking, attack, and assessment (G)
	Reassign (G)
	Conduct target acquisition, assessment (G)
	Consolidate, evaluate, display target info and intell (G)
	Recommend classification and attack priorities (G)
	Maintain and provide lists to SA reps (G)
	Prepare bulletins after amphib force control passed ahore (G)
	Merge subordinate lists into MAGTF list (G)
	Deliver fires on detected targets (G)
	Disseminate fires info on unit loc, target info, FSCMs (G)
	Recommend attack (G)
	Develop targets with own assets (G)
Terminal control assets	Manage terminal control assets (A)
Threat forces	Assess shaping (C), neutralize air threats (A)
	Shape (A)
	Evacuate enemy POWs (A)

Appendix C

Table 14 lists the environmental objects and requirements pairs with appropriate citing guidance statements for each pair. Each pair can support multiple MEB elements (CE, GCE, ACE, CSSE) and planning or execution training requirements, listed in table 14 as supported actions. The table also indicates the maximum level of warfare applicable to the training requirements cited.

Table 14. Pairs of environmental objects and requirements supporting training requirements

Environment object	Environmental requirement	CE	GCE	ACE	CSSE	Planning	Execution	Max warfare level	Supported action - planning	Planning index	Supported action - execution	Execution index
Phase	Future events	X			X	P		Operational	Plan next mission (C), Plan branches and sequels (C), Plan next battle (C), determine deployment sequence (S)			
Phase	Targets		X			P		Operational	Develop future target s (G)			
Phase	Fire support operations		X			P		Operational	Plan, integrate, coordinate current and future Rn scheme of maneuver (G)			
Phase	Maneuver elements		X			P		Operational	Plan, integrate, coordinate arms supporting current and future Rn scheme of maneuver (G)			
Phase	Resources	X	X		X	P		Operational	Reallocate for COAs (C), develop future intell asset placement (G), determine deployment sequence and priorities (S)			
Theater	Battlespace	X			X	P	E	Operational	Develop missions (C); recommend joint airspace changes (C), consider impact on logistics (S)		Coordinate terrain management (C)	
Theater	Threat forces	X		X			E	Operational			Assess shaping (C), neutralize air threats (A)	
Theater	Targets		X			P	E	Operational	Develop list, recommend, acquire, prioritize (G)		Find, track, engage (G)	
Theater	Joint force			X		P		Operational	Coordinate with (A)			
Theater	Operations	X		X		P	E	Operational	Plan air ops (A), coordinate air ops with GCE and CSSE (A), integrate air fires with ground ops (A)		Monitor (C)	
Theater	Fire control areas	X	X			P		Operational	Determine FSCMs (C), establish and maintain FSCMs (A)			
Theater	Maneuver elements			X			E	Operational			Integrate air fires with maneuver (A)	
Theater	Fire support operations		X	X		P	E	Operational	Translate data into capabilities (G), integrate with ground maneuver (A)		Make and monitor allocations (G), integrate air fires with maneuver (A)	
Theater	Sorties	X		X		P	E	Operational	Discuss excess with JFC (C)		Recommend apportionment (C), request, distribute, control (A)	
Theater	Aviation assets	X		X		P	E	Operational	Keep as direct support (C)		Command and control, maintain, provide logistics, assess serviceability (A)	

Table 14. Pairs of environmental objects and requirements supporting training requirements (continued)

Environment object	Environmental requirement	CE	GCE	ACE	CSSE	Planning	Execution	Max warfare level	Supported action - planning	Planning index	Supported action - execution	Execution index
Theater	Resources	X	X	X		P	E	Operational	Request (G), redirect, integrate, synchronize (C), identify R&S requirements (C), plan, coordinate, and manage supporting assets (A)		Monitor status of forces and materials (C), assess nonorganic intell assets (G)	
Theater	Log facilities				X	P	E	Operational	Determine location and size (S)		Develop (S), establish mobility control centers (S)	
Theater	Log sources, assets and supplies				X	P	E	Operational	Identify, determine critical and vital, plan LOC movement (S), source requirements (S)		Control offloaded throughput (S), distribute equipment (S)	
Theater	Log support forces				X	P	E	Operational	Organize, prepare log elements (S)		Coordinate and supervise closure (S), allocate intratheater transport (S), control MPF movements (S)	
Host nation	Log sources, assets and supplies				X	P	E	Operational	Determine, identify, and evaluate (S)		Coordinate support (S)	
Deep	Fire support operations		X			P	E	Operational	Plan and coordinate (G)		Conduct fire support (G)	
Deep	Maneuver elements		X				E	Operational			Conduct fire support (G)	
Deep	Threat forces			X			E	Operational			Shape (A)	
Deep	Operations			X			E	Operational			Control air operations (A)	
Close	Fire support operations		X			P	E	Operational	Plan and coordinate (G)		Conduct fire support (G)	
Close	Log facilities				X		E	Operational			Establish forward bases (S)	
Rear	Operations	X					E	Operational			Monitor (C)	
Rear	Fire support operations		X			P	E	Operational	Plan and coordinate (G)		Conduct fire support (G)	
Rear	Maneuver elements		X				E	Operational			Conduct fire support (G)	
Rear	Log facilities				X		E	Operational			Establish combat support area (S)	
Rear	Log sources, assets and supplies				X		E	Operational			Receive and store supplies (S)	
Port	Log facilities				X	P		Operational	Plan embarkation points location and time (S)			

Table 14. Pairs of environmental objects and requirements supporting training requirements (continued)

Environment object	Environmental requirement	CE	GCE	ACE	CSSE	Planning	Execution	Max warfare level	Supported action - planning	Planning index	Supported action - execution	Execution index
Port	Maneuver elements		X		X	P	E	Operational	Identify embarkation location and time (S)		Conduct fire support (G)	
Port	Log support forces				X		E	Operational			Prep for MPF arrival (S), control log control groups (S)	
Port	Log movement				X		E	Operational			Convoy MPE/S and personnel (S), unload ships (S)	
Beach	Log support forces				X		E	Operational			Prep for MPSRON arrival (S), control log control groups (S)	
Airfield	Log movement				X		E	Operational			Control offload (S)	
Airfield	Log support forces				X		E	Operational			Form and dispatch convoys (S), operate log control groups (S)	
LOCs	Log movement				X		E	Operational			Plan, route, schedule, control (S)	
Battle area	Air support assets		X				E	Tactical			Prioritize, prepare, forward, coordinate air support requests (G)	87, 89-91
Engagement areas	Aviation assets			X			E	Tactical			Coordinate (A)	346
Engagement areas	Communications			X			E	Tactical			Relay (A)	344
Battle area	Communications structure		X	X			E	Tactical			Establish and maintain liaison and comms facilities (G); establish and maintain liaison and comms facilities (A); Install, maintain, operate structure to communicate to direct subordinates (A)	93,94; 331, 332; 383-388
Battle area	Data systems		X				E	Tactical			Maintain target and situation maps (G); maintain target data (G)	206; 207
Engagement areas	Threat forces			X			E	Tactical			Evacuate enemy POWs (A)	355
Battle area	Engagement areas		X			P		Tactical	Finalize engagement areas (G)	174		

Table 14. Pairs of environmental objects and requirements supporting training requirements (continued)

Environment object	Environmental requirement	CE	GCE	ACE	CSSE	Planning	Execution	Max warfare level	Supported action - planning	Planning index	Supported action - execution	Execution index
Battle area	Fire control areas		X			P	E	Tactical	Establish and plan FSCMs (G); Finalize FSCMs (G)	138, 178, 179; 173	Disseminate fires info on unit loc, target info, FSCMs (G)	238
Battle area	Fire support assets		X				E	Tactical			Coordinate (G); coordinate fires between supporting arms (G)	77; 233
Battle area	Fires		X				E	Tactical			Obtain info and intell from fire support missions (G); deliver fires on detected targets (G); clear fire request (G); integrate, coordinate fires to support scheme of maneuver (G); request additional FS when needed (G); resolve conflicts at lowest level (G)	216, 217; 227; 230; 231, 232; 234; 237
Battle area	Aviation assets			X			E	Tactical			Assign aircrew to aircraft (A)	295
Battle area	Maneuver areas		X			P		Tactical	Establish triggers (G); finalize triggers (G)	155; 175		
Battle area	Maneuver elements		X	X			E	Tactical			Integrate, coordinate fires to support scheme of maneuver (G); disseminate fires info on unit loc, target info, FSCMs (G); evacuate casualties (A)	231, 232; 238;354
Battle area	Observers		X				E	Tactical			Coordinate fires between supporting arms (G)	233
Battle area	Targets		X			P	E	Tactical	Finalize high priority target acquisition, tracking, attack, and assessment (G); reassign (G)	172; 183	Conduct target acquisition, assessment (G); Consolidate, evaluate, display target info and intell (G); recommend classification and attack priorities (G); maintain and provide lists to SA reps (G); prepare bulletins after amphib force control passed ahore (G); merge subordinate lists into MAGTF list (G); deliver fires on detected targets (G); disseminate fires info on unit loc, target info, FSCMs (G)	78, 80; 208-213; 214, 215; 220; 221; 224; 227; 238

Table 14. Pairs of environmental objects and requirements supporting training requirements (continued)

Environment object	Environmental requirement	CE	GCE	ACE	CSSE	Planning	Execution	Max warfare level	Supported action - planning	Planning index	Supported action - execution	Execution index
Maneuver areas	Log support forces				X		E	Tactical			Employ CSSE dets in direct support to GCE maneuver elements and ACE units (S)	447
Maneuver areas	Fire support assets		X	X		P	E	Tactical	Coordinate positioning (G)	185	Coordinate air missions integrated with ground and supporting arms (A)	318
Maneuver areas	Friendly aircraft			X			E	Tactical			Coordinate and direct air supporting ground ops (A); coordinate air missions integrated with ground and supporting arms (A); coordinate aircraft actions (A); provide terminal control of aircraft supporting offensive ops (A)	315; 318; 337; 342
Maneuver areas	Terminal control assets			X			E	Tactical			Manage terminal control assets (A)	319
Engagement areas	Fires		X	X		P	E	Tactical	Coordinate specialized munitions delivery (G)	189	Control artillery and NSFS missions (A); control artillery and NSFS missions (A)	343; 343
Engagement areas	Observers		X			P		Tactical	Coordinate observation coverage (G)	187		
Engagement areas	Targets		X				E	Tactical			Recommend attack (G)	81
Landing zone	Maneuver elements			X			E	Tactical			Facilitate landing and movement (A)	352, 353
Landing zone	Resources			X			E	Tactical			Facilitate landing and movement equipment (A); facilitate landing and movement of supplies (A)	352, 353; 352, 353
Deep	Resources			X			E	Tactical			Collect and display sensor info (A)	366, 367
Rear	Maneuver elements			X			E	Tactical			Provide rear area security and air defense (A)	414
Rear	Log facilities				X		E	Tactical			Establish maintenance, parking, staging and warehousing areas (S)	520
Rear	Fires		X				E	Tactical			Coordinate and clear rear area fire missions (G)	239, 240

Table 14. Pairs of environmental objects and requirements supporting training requirements (continued)

Environment object	Environmental requirement	CE	GCE	ACE	CSSE	Planning	Execution	Max warfare level	Supported action - planning	Planning index	Supported action - execution	Execution index
Rn AOR	Communications structure		X				E	Tactical			Operate FSC nets (G); establish and maintain liaison and comms facilities (G)	116; 118, 119
Rn AOR	Fire support assets		X				E	Tactical			Allocate attack assets (G); allocate fire support assets to Bns (CAS, NSFS…) (G); coordinate employment (G)	102; 105; 112
Rn AOR	Fires		X				E	Tactical			Plan, request (G); Monitor clearance (G); coordinate (G)	103, 104; 108; 109
Rn AOR	Resources		X				E	Tactical			Perform targeting process (G)	100
Rn AOR	Targets		X				E	Tactical			Develop targets with own assets (G)	101
Bn AOR	Fire support assets		X				E	Tactical			Coordinate Co maneuver scheme with supporting arms (G)	133
Bn AOR	Fires		X				E	Tactical	Plan and coordinate Co fires (G)	122	Coordinate Co fires (G), call for and adjust arty, NSFS, mortar fires (G)	123,124-132
Bn AOR	Maneuver elements		X				E	Tactical			Coordinate ME with supporting arms (G)	133
Land-based air supply area	AEF			X	X		E	Tactical			Employ CSSE dets in direct support to GCE maneuver elements and ACE units (S); transport ACE supplies from MAGTF point of entry to EAF(A)	447, 415
Airspace	Air routes			X			E	Tactical			Recommend air routing (A)	351
Airspace	Air sector			X			E	Tactical			Monitor manage and control sector to include AOR, AEC, FOB (A)	375, 376, 377
Airspace	Air support assets			X			E	Tactical			Request and control air support (A)	335, 336

Table 14. Pairs of environmental objects and requirements supporting training requirements (continued)

Environment object	Environmental requirement	CE	GCE	ACE	CSSE	Planning	Execution	Max warfare level	Supported action - planning	Planning index	Supported action - execution	Execution index
Airspace	Friendly aircraft			X			E	Tactical			Exercise procedural control of transiting aircraft (A); control and manage (A); intercept hostile missiles and aircraft (A); direct, positively control and provide navigation assistance for friendly aircraft (A)	320; 356, 357; 362; 363, 364, 365
Airspace	Hostile aircraft			X			E	Tactical			Detect, identify, and intercept (A)	358, 360, 362
Airspace	Resources			X			E	Tactical			Reconnoitre and surveil airspace (A)	340, 341
Air defense zones	Air defense assets			X			E	Tactical			Manage and coordinate air defense weapons (A); provide fires for forward combat elements, special ops, vital areas, and installations (A); coordinate detection in zones (A); manage air defense weapons (A)	369, 370; 380, 381; 378; 372
Air routes	Friendly aircraft			X			E	Tactical			Transport ACE supplies from MAGTF point of entry to EAF (A)	415
Air routes	Resources			X			E	Tactical			Transport ACE supplies from MAGTF point of entry to EAF (A)	415

Appendix D

Tables 15-17 list training areas, subareas, environmental objects and requirements, and supported actions for each of the three major MEB training areas we analyzed. The first column gives the general training region (SW CONUS, Mid-LANT, GOMEX). The next four columns give the sub-areas (environmental object), supporting assets (environmental requirement), warfare level, and supported training actions that the specific training facility must support. Candidate local training areas within the training region, and problems associated with the candidate, follow each requirement.

Table 15. Required MEB training environmental and candidate supporting facilities for SW CONUS

Training area	Environment object	Environmental requirement	Max warfare level	Supported actions	Local training area	Local area issue
SW CONUS	Phase	Future events	Operational	Plan next mission (C), Plan branches and sequels (C), Plan next battle (C), determine deployment sequence (S)	Time: At least two sequential Bn-scale battles for operational, one for tactical	
SW CONUS		Targets	Operational	Develop future targets (G)	Same as above	
SW CONUS		Fire support operations	Operational	Plan, integrate, coordinate current and future Rn scheme of maneuver (G)	Same as above	
SW CONUS		Maneuver elements	Operational	Plan, integrate, coordinate arms supporting current and future Rn scheme of maneuver (G)	Same as above	
SW CONUS		Resources	Operational	Reallocate for COAs (C), develop future intell asset placement (G), determine deployment sequence and priorities (S)	Same as above	
SW CONUS	Theater	Battlespace	Operational	Develop missions (C); recommend joint airspace changes (C), consider impact on logistics (S); coordinate terrain management (C)	Pendleton-North Island-29 Palms-Yuma	
SW CONUS		Threat forces	Operational	Assess shaping (C), neutralize air threats (A)	Pendleton-North Island-29 Palms-Yuma	
SW CONUS		Targets	Operational	Develop list, recommend, acquire, prioritize (G); find, track, engage (G)	Pendleton-North Island-29 Palms-Yuma	
SW CONUS		Joint Force	Operational	Coordinate with Joint forces (A)	Pendleton-North Island-29 Palms-Yuma	
SW CONUS		Operations	Operational	Plan air ops (A), coordinate air ops with GCE and CSSE (A), integrate air fires with ground ops (A); monitor (C); support maneuver elements from sea base (2015); plan assaults, raids, feints, security operations (2015) (G); direct assaults, raids, feints, security operations, movement of sea base, split sea base ops, relief of USA units (2015) (C)	Pendleton-North Island-29 Palms-Yuma	
SW CONUS		Fire control areas	Operational	Determine FSCMs (C), establish and maintain FSCMs (A)	Pendleton-North Island-29 Palms-Yuma	
SW CONUS		Maneuver elements	Operational	Integrate air fires with maneuver (A); coordinate with maneuver elements ashore, higher HQ (2015) (C)	Pendleton-North Island-29 Palms-Yuma	

Table 15. Required MEB training environmental and candidate supporting facilities for SW CONUS (continued)

Training area	Environment object	Environmental requirement	Max warfare level	Supported actions	Local training area	Local area issue
SW CONUS		Fire support operations	Operational	Translate data into capabilities (G), integrate with ground maneuver (A); make and monitor allocations (G), integrate air fires with maneuver (A)	Pendleton-North Island-29 Palms-Yuma	
SW CONUS		Sorties	Operational	Discuss excess with JFC(C); recommend apportionment (C), request, distribute, control (A)	Pendleton-North Island-29 Palms-Yuma	
SW CONUS		Aviation assets	Operational	Keep as direct support (C); command and control, maintain, provide logistics, assess serviceability (A)	Pendleton-North Island-29 Palms-Yuma	
SW CONUS		Resources	Operational	Request (G), redirect, integrate, synchronize (C), identify R&S requirements (C), plan, coordinate, and manage supporting asset (A); monitor status of forces and materials (C), assess nonorganic intell assets (G); allocate resources (2015) (C)	Pendleton-North Island-29 Palms-Yuma	
SW CONUS		Log facilities	Operational	Determine location and size (S); develop (S), establish mobility control centers (S)	Pendleton-North Island-29 Palms-Yuma	
SW CONUS		Log sources, assets and supplies	Operational	Identify, determine critical and vital, plan LOC movement (S), source requirements (S); control offloaded throughput (S), distribute equipment (S); support maneuver elements from sea base (2015)	Pendleton-North Island-29 Palms-Yuma	
SW CONUS		Log support forces	Operational	Organize, prepare log elements (S); coordinate and supervise closure (S), allocate intratheater transport (S), control MPF movements (S); conduct at-sea arrival and assembly (2015); coordinate with sea based support elements (2015) (C)	Pendleton-North Island-29 Palms-Yuma	
SW CONUS	Host nation	Log sources, assets and supplies	Operational	Determine, identify, and evaluate (S); coordinate support (S)	San Diego County	

Table 15. Required MEB training environmental and candidate supporting facilities for SW CONUS (continued)

Training area	Environment object	Environmental requirement	Max warfare level	Supported actions	Local training area	Local area issue
SW CONUS	Sea area	Sea base	Operational	Conduct at-sea arrival and assembly 2015; Support maneuver elements from sea base(2015); direct assaults, raids, feints, security operations, movement of sea base, split sea base ops, relief of USA units (2015); coordinate with sea based support elements (2015)	SOCAL OPAREA	Amphibs as sea base (2015)
SW CONUS	Deep	Fire support operations	Operational	Plan and coordinate (G); conduct fire support (G)	Yuma	
SW CONUS		Maneuver elements	Operational	Conduct fire support (G)	Yuma	Limited ground maneuver
SW CONUS		Threat forces	Operational	Shape (A)	Yuma	
SW CONUS		Operations	Operational	Control air operations (A)	Yuma	
SW CONUS	Close	Fire support operations	Operational	Plan and coordinate (G); conduct fire support (G)	29 Palms	
SW CONUS		Log facilities	Operational	Establish forward bases (S)	30 Palms	
SW CONUS	Rear	Operations	Operational	Monitor (C)	Camp Pendleton	
SW CONUS		Fire support operations	Operational	Plan and coordinate (G); conduct fire support (G)	Camp Pendleton	
SW CONUS		Maneuver elements	Operational	Conduct fire support (G)	Camp Pendleton	
SW CONUS		Log facilities	Operational	Establish combat support area (S)	Camp Pendleton	
SW CONUS		Log sources, assets and supplies	Operational	Receive and store supplies (S)	Camp Pendleton	
SW CONUS	Port	Log facilities	Operational	Plan embarkation points location and time (S)	San Diego (SPOE)	
SW CONUS		Maneuver elements	Operational	Identify embarkation location and time (S); conduct fire support (G)	San Diego (SPOE)	No fire support (G)
SW CONUS		Log support forces	Operational	Prep for MPF arrival (S), control log control groups (S)	San Diego (SPOE)	
SW CONUS		Log movement	Operational	Convoy MPE/S and personnel (S), unload ships (S)	San Diego (SPOE)	
SW CONUS	Beach	Log support forces	Operational	Prep for MPSRON arrival (S), control log control groups (S)	Camp Pendleton	
SW CONUS	Airfield	Log movement	Operational	Control offload (S)	Camp Pendleton	

Table 15. Required MEB training environmental and candidate supporting facilities for SW CONUS (continued)

Training area	Environment object	Environmental requirement	Max warfare level	Supported actions	Local training area	Local area issue
SW CONUS		Log support forces	Operational	Form and dispatch convoys (S), operate log control groups (S)	Camp Pendleton	
SW CONUS	LOCs	Log movement	Operational	Plan, route, schedule, control (S)	Pendleton-North Island-29 Palms-Yuma	150 NM Pendleton-Yuma
SW CONUS	Sea area	Sea base	Tactical	Serve as reserve force (2015) (G); coordinate with sea base and Bns (2015) (G); operate from sea base (2015) (C, G, A, S); coordinate with sea base and maneuver elements ashore (2015)(S)	Offshore Pendleton	Amphibs as sea base (2015)
SW CONUS	Battle area	Air support assets	Tactical	Prioritize, prepare, forward, coordinate air support requests (G)	Pendleton, 29 Palms	
SW CONUS		Aviation assets	Tactical	Coordinate (A)	Pendleton, 29 Palms	
SW CONUS		Communications	Tactical	Relay (A)	Pendleton, 29 Palms	
SW CONUS		Communications structure	Tactical	Establish and maintain liaison and comms facilities (G); establish and maintain liaison and comms facilities (A); Install, maintain, operate structure to communicate to direct subordinates (A)	Pendleton, 29 Palms	
SW CONUS		Data systems	Tactical	Maintain target and situation map (G); maintain target data (G)	Pendleton, 29 Palms	
SW CONUS		Threat forces	Tactical	Evacuate enemy POWs (A)	Pendleton, 29 Palms	
SW CONUS		Engagement areas	Tactical	Finalize engagement areas (G)	Pendleton, 29 Palms	
SW CONUS		Fire control areas	Tactical	Establish and plan FSCMs (G); finalize FSCMs (G); disseminate fires info on unit loc, target info, FSCMs (G)	Pendleton, 29 Palms	
SW CONUS		Fire support assets	Tactical	Coordinate (G); coordinate fires between supporting arms (G)	Pendleton, 29 Palms	
SW CONUS		Fires	Tactical	Obtain info and intell from fire support missions (G); deliver fires on detected targets (G); clear fire request (G); integrate, coordinate fires to support scheme of maneuver (G); request additional FS when needed (G); resolve conflicts at lowest level (G)	Pendleton, 29 Palms	

Table 15. Required MEB training environmental and candidate supporting facilities for SW CONUS (continued)

Training area	Environment object	Environmental requirement	Max warfare level	Supported actions	Local training area	Local area issue
SW CONUS		Aviation assets	Tactical	Assign aircrew to aircraft (A); support assaults, raids, return to sea base with vertical lift (2015) (A); conduct preemptive air strikes (2015)(A); conduct tactics air support (2015) (A)	Pendleton, 29 Palms	
SW CONUS		Maneuver areas	Tactical	Establish triggers (G); finalize triggers (G)	Pendleton, 29 Palms	
SW CONUS		Maneuver elements	Tactical	Integrate, coordinate fires to support scheme of maneuver (G); disseminate fires info on unit loc, target info, FSCMs (G); evacuate casualties (A); conduct single and dual Bn assaults (2015)(G); coordinate with sea base and Bns (2015) (G); coordinate simultaneous Bn assaults (2015) (C); transfer control to USA (2015)(C); coordinate with SOF ashore, sea base and maneuver elements ashore (2015) (A); coordinate with sea base and maneuver elements ashore (2015)(S)	Pendleton, 29 Palms	
SW CONUS		Observers	Tactical	Coordinate fires between supporting arms (G)	Pendleton, 29 Palms	
SW CONUS		Targets	Tactical	finalize high priority target acquisition, tracking, attack, and assessment (G); reassign (G); conduct target acquisition, assessment (G); Consolidate, evaluate, display target info and intell (G); recommend classification and attack priorities (G); maintain and provide lists to SA reps (G); prepare bulletins after amphib force control passed ahore (G); merge subordinate lists into MAGTF list (G); deliver fires on detected targets (G); disseminate fires info on unit loc, target info, FSCMs (G)	Pendleton, 29 Palms	
SW CONUS	Maneuver areas	Log support forces	Tactical	Employ CSSE dets in direct support to GCE maneuver elements and ACE units (S); provide mobile CSS dets to maneuver elements (2015) (S); support maneuver elements, support USA units (2015 (S)	Pendleton, 29 Palms	
SW CONUS		Fire support assets	Tactical	Coordinate positioning (G); coordinate air missions integrated with ground and supporting arms (A)	Pendleton, 29 Palms	

Table 15. Required MEB training environmental and candidate supporting facilities for SW CONUS (continued)

Training area	Environment object	Environmental requirement	Max warfare level	Supported actions	Local training area	Local area issue
SW CONUS		Friendly aircraft	Tactical	Coordinate and direct air supporting ground ops (A); coordinate air missions integrated with ground and supporting arms (A); coordinate aircraft actions (A); provide terminal control of aircraft supporting offensive ops (A)	Pendleton, 29 Palms	
SW CONUS		Terminal control assets	Tactical	Manage terminal control assets (A)	Pendleton, 29 Palms	
SW CONUS	Engagement areas	Fires	Tactical	Coordinate specialized munitions delivery (G); plan and coordinate Co fires (G); control artillery and NSFS missions (A); control artillery and NSFS missions (A)	Pendleton, 29 Palms, San Clemente	NSFS not integrated into maneuver else Arty simulation of NSFS(A,G), 29 Palms sim NSFS(A,G)
SW CONUS		Observers	Tactical	Coordinate observation coverage (G)	Pendleton, 29 Palms, San Clemente	
SW CONUS		Targets	Tactical	Recommend attack (G)	Pendleton, 29 Palms, San Clemente	
SW CONUS	Landing zone	Maneuver elements	Tactical	Facilitate landing and movement (A);	Pendleton, 29 Palms	
SW CONUS		Resources	Tactical	Facilitate landing and movement equipment (A); facilitate landing and movement of supplies (A)	Pendleton, 29 Palms	
SW CONUS	Port	Maneuver elements	Tactical	Seize and secure ports, port cities, airfields (2015)(G)	San Diego (SPOE)	simulated seizure
SW CONUS	Airfield	Maneuver elements	Tactical	Seize and secure ports, port cities, airfields (2015) (G)	29 Palms	EAF needed for base ops
SW CONUS	Mountainous area	Maneuver elements	Tactical	Bn assault inland and mountainous objectives (2015)(G)	Camp Pendleton, 29 Palms	
SW CONUS	Inland area	Maneuver elements	Tactical	Bn assault inland and mountainous objectives (2015)(G)	29 Palms	
SW CONUS	Beach	Maneuver elements	Tactical	Conduct amphibious assaults at night (2015) (G)	Camp Pendleton	
SW CONUS	Urban	Maneuver elements	Tactical	Seize and secure ports, port cities, airfields (2015) (G)	Yuma (aviation), Pendleton (ground)	
SW CONUS	Deep	Resources	Tactical	Collect and display sensor info (A)	Yuma	
SW CONUS	Rear	Maneuver elements	Tactical	Provide rear area security and air defense (A)	Pendleton	

Table 15. Required MEB training environmental and candidate supporting facilities for SW CONUS (continued)

Training area	Environment object	Environmental requirement	Max warfare level	Supported actions	Local training area	Local area issue
SW CONUS		Log facilities	Tactical	Establish maintenance, parking, staging and warehousing areas (S)	Pendleton	
SW CONUS		Fires	Tactical	Coordinate and clear rear area fire missions (G)	Pendleton	
SW CONUS	Bde AOR	Communications structure	Tactical	Operate FSC nets (G); establish and maintain liaison and comms facilities (G)	Pendleton, 29 Palms	
SW CONUS		Maneuver elements	Tactical	Conduct multiple simultaneous Bn assaults and raids on multiple and single targets (2015) (G); conduct surface and vertical assaults (2015) (G)	Pendleton, 29 Palms	
SW CONUS		Aviation assets	Tactical	Conduct multiple simultaneous Bn assaults and raids on multiple and single targets (2015) (G); conduct surface and vertical assaults (2015) (G)	Pendleton, 29 Palms	
SW CONUS		Fire support assets	Tactical	Allocate attack assets (G); allocate fire support assets to Bns (CAS, NSFS…) (G); coordinate employment (G)	Pendleton, 29 Palms	NSFS not integrated into maneuver else Arty simulation of NSFS(G)
SW CONUS		Fires	Tactical	Plan, request (G); Monitor clearance (G); coordinate (G)	Pendleton, 29 Palms	
SW CONUS		Resources	Tactical	Perform targeting process (G)	Pendleton, 29 Palms	
SW CONUS		Targets	Tactical	Develop targets with own assets (G)	Pendleton, 29 Palms	
SW CONUS	Bn AOR	Fire support assets	Tactical	Coordinate Co maneuver scheme with supporting arms (G)	Pendleton, 29 Palms	
SW CONUS		Fires	Tactical	Call for and adjust arty, NSFS, mortar fires (G)	San Clemente, Pendleton, 29 Palms	NSFS San Clemente or simulated
SW CONUS		Maneuver elements	Tactical	Coordinate ME with supporting arms (G); conduct air, surface, and vertical assaults, raids, feints, unit relief, and link-up (2015) (G)	San Clemente, Pendleton, 29 Palms	
SW CONUS		Aviation assets	Tactical	Conduct air, surface, and vertical assaults, raids, feints, unit relief, and link-up (2015) (G)	San Clemente, Pendleton, 29 Palms	
SW CONUS	Landbased air supply area	EAF	Tactical	Employ CSSE dets in direct support to GCE maneuver elements and ACE units (S); transport ACE supplies from MAGTF point of entry to EAF (A)	29 Palms	
SW CONUS	Airspace	Air routes	Tactical	Recommend air routing (A)	Pendleton, 29 Palms, Yuma	

Table 15. Required MEB training environmental and candidate supporting facilities for SW CONUS (continued)

Training area	Environment object	Environmental requirement	Max warfare level	Supported actions	Local training area	Local area issue
SW CONUS		Air sector	Tactical	Monitor manage and control sector to include AOR, AEC, FOB(A)	Pendleton, 29 Palms, Yuma	
SW CONUS		Air support assets	Tactical	Request and control air support (A)	Pendleton, 29 Palms, Yuma	
SW CONUS		Friendly aircraft	Tactical	Exercise procedural control of transiting aircraft (A); control and manage (A); intercept hostile missiles and aircraft (A); direct, positively control and provide navigation assistance for friendly aircraft (A)	Pendleton, 29 Palms, Yuma	
SW CONUS		Hostile aircraft	Tactical	Detect, identify, and intercept (A)	Pendleton, 29 Palms, Yuma	
SW CONUS		Resources	Tactical	Reconnoitre and surveil airspace (A)	Pendleton, 29 Palms, Yuma	
SW CONUS	Air defense zones	Air defense assets	Tactical	Manage and coordinate air defense weapons (A); provide fires for forward combat elements, special ops, vital areas, and installations (A); coordinate detection in zones (A); manage air defense weapons (A)	Yuma R2301	
SW CONUS	Air routes	Friendly aircraft	Tactical	Transport ACE supplies from MAGTF point of entry to EAF (A)	Pendleton-29 Palms co-use connecting air corridors	

Table 16. Required MEB training environmental and candidate supporting facilities for MIDLANT

	Environment object	Environmental requirement	Max warfare level	Supported actions	MIDLANT local training area	MIDLANT local area issue
MIDLANT	Phase	Future events	Operational	Plan next mission (C), Plan branches and sequels (C), Plan next battle (C), determine deployment sequence (S)	Time: At least two sequential Bn-scale battles for operational, one for tactical	Co size maneuver only on Camp Lejeune and Ft Bragg?
MIDLANT		Targets	Operational	Develop future targets (G)	Same as above	
MIDLANT		Fire support operations	Operational	Plan, integrate, coordinate current and future Rn scheme of maneuver (G)	Same as above	
MIDLANT		Maneuver elements	Operational	Plan, integrate, coordinate arms supporting current and future Rn scheme of maneuver (G)	Same as above	
MIDLANT		Resources	Operational	Reallocate for COAs (C), develop future intell asset placement (G), determine deployment sequence and priorities (S)	Same as above	
MIDLANT	Theater	Battlespace	Operational	Develop missions (C); recommend joint airspace changes (C), consider impact on logistics (S); coordinate terrain management (C)	Greater Camp Lejeune area	
MIDLANT		Threat forces	Operational	Assess shaping (C), neutralize air threats (A)	Greater Camp Lejeune area	
MIDLANT		Targets	Operational	Develop list, recommend, acquire, prioritize (G); find, track, engage (G)	Greater Camp Lejeune area	
MIDLANT		Joint Force	Operational	Coordinate with (A)	Greater Camp Lejeune area	
MIDLANT		Operations	Operational	Plan air ops (A), coordinate air ops with GCE and CSSE(A), integrate air fires with ground ops (A); monitor (C); support maneuver elements from seabase(2015); plan assaults, raids, feints, security operations (2015)(G); direct assaults, raids, feints, security operations, movement of seabase, split seabase ops, relief of USA units (2015)(C)	Greater Camp Lejeune area	
MIDLANT		Fire control areas	Operational	Determine FSCMs (C), establish and maintain FSCMs (A)	Greater Camp Lejeune area	

Table 16. Required MEB training environmental and candidate supporting facilities for MIDLANT (continued)

	Environment object	Environmental requirement	Max warfare level	Supported actions	MIDLANT local training area	MIDLANT local area issue
MIDLANT		Maneuver elements	Operational	Integrate air fires with maneuver (A); coordinate with maneuver elements ashore, higher HQ (2015)(C)	Greater Camp Lejeune area	
MIDLANT		Fire support operations	Operational	Translate data into capabilities (G), integrate with ground maneuver (A); make and monitor allocations (G), integrate air fires with maneuver (A)	Greater Camp Lejeune area	
MIDLANT		Sorties	Operational	Discuss excess with JFC(C); recommend apportionment (C), request, distribute, control (A)	Greater Camp Lejeune area	
MIDLANT		Aviation assets	Operational	Keep as direct support (C); command and control, maintain, provide logistics, assess serviceability (A)	Greater Camp Lejeune area	
MIDLANT		Resources	Operational	Request (G), redirect, integrate, synchronize (C), identify R&S requirements (C), plan, coordinate, and manage supporting assets (A); monitor status of forces and materials (C), assess nonorganic intell assets (G); allocate resources (2015)(C)	Greater Camp Lejeune area	
MIDLANT		Log facilities	Operational	Determine location and size (S); develop (S), establish mobility control centers (S)	Greater Camp Lejeune area	
MIDLANT		Log sources, assets and supplies	Operational	Identify, determine critical and vital, plan LOC movement (S), source requirements (S); control offloaded throughput (S), distribute equipment (S); support maneuver elements from seabase(2015)	Greater Camp Lejeune area	

Table 16. Required MEB training environmental and candidate supporting facilities for MIDLANT (continued)

	Environment object	Environmental requirement	Max warfare level	Supported actions	MIDLANT local training area	MIDLANT local area issue
MIDLANT		Log support forces	Operational	Organize, prepare log elements (S); coordinate and supervise closure (S), allocate intratheater transport (S), control MPF movements (S); conduct at-sea arrival and assembly(2015); coordinate with sea-based support elements (2015)(C)	Greater Camp Lejeune area	
MIDLANT	Host nation	Log sources, assets and supplies	Operational	Determine, identify, and evaluate (S); coordinate support (S)	Savannah GA	Beaufort County, SC
MIDLANT	Sea area	Seabase	Operational	Conduct at-sea arrival and assembly(2015); Support maneuver elements from seabase(2015); direct assaults, raids, feints, security operations, movement of seabase, split seabase ops, relief of USA units (2015); coordinate with seabased support elements (2015)	VACAPES OPAREA	Amphibs as seabase (2015)
MIDLANT	Deep	Fire support operations	Operational	Plan and coordinate (G); conduct fire support (G)	Ft AP Hill	
MIDLANT		Maneuver elements	Operational	Conduct fire support (G)	Ft AP Hill	
MIDLANT		Threat forces	Operational	Shape (A)	Ft AP Hill	
MIDLANT		Operations	Operational	Control air operations (A)	Ft AP Hill	
MIDLANT	Close	Fire support operations	Operational	Plan and coordinate (G); conduct fire support (G)	Camp Lejeune	200 nm MCAS Beaufort (rear) to Camp Lejeune (close)
MIDLANT		Log facilities	Operational	Establish forward bases (S)	Camp Lejeune	
MIDLANT	Rear	Operations	Operational	Monitor (C)	MCAS Beaufort	
MIDLANT		Fire support operations	Operational	Plan and coordinate (G); conduct fire support (G)	MCAS Beaufort	
MIDLANT		Maneuver elements	Operational	Conduct fire support (G)	MCAS Beaufort	
MIDLANT		Log facilities	Operational	Establish combat support area (S)	MCAS Beaufort	
MIDLANT		Log sources, assets and supplies	Operational	Receive and store supplies (S)	MCAS Beaufort	

Table 16. Required MEB training environmental and candidate supporting facilities for MIDLANT (continued)

	Environment object	Environmental requirement	Max warfare level	Supported actions	MIDLANT local training area	MIDLANT local area issue
MIDLANT	Port	Log facilities	Operational	Plan embarkation points location and time(S)	Savannah, GA	
MIDLANT		Maneuver elements	Operational	Identify embarkation location and time(S); conduct fire support(G)	Savannah, GA	No fire support(G)
MIDLANT		Log support forces	Operational	Prep for MPF arrival(S), control log control groups(S)	Savannah, GA	
MIDLANT		Log movement	Operational	Convoy MPE/S and personnel (S), unload ships (S)	Savannah, GA	
MIDLANT	Beach	Log support forces	Operational	Prep for MPSRON arrival(S), control log control groups (S)	Camp Lejeune	
MIDLANT	Airfield	Log movement	Operational	Control offload(S)	MCAS Beaufort	
MIDLANT		Log support forces	Operational	Form and dispatch convoys (S), operate log control groups (S)	MCAS Beaufort	
MIDLANT	LOCs	Log movement	Operational	Plan, route, schedule, control (S)	Savannah-MCAS Beaufort-Camp Lejeune	200 nm to Lejeune-AP Hill
MIDLANT	Sea area	Seabase	Tactical	Serve as reserve force (2015)(G); coordinate with seabase and Bns (2015)(G); operate from seabase (2015) (C, G, A, S); coordinate with seabase and maneuver elements ashore (2015)(S)	Offshore Lejeune	Amphibs as seabase (2015)
MIDLANT	Battle area	Air support assets	Tactical	Prioritize, prepare, forward, coordinate air support requests (G)	Camp Lejeune-Ft AP Hill	
MIDLANT		Aviation assets	Tactical	Coordinate (A)	Camp Lejeune-Ft AP Hill	
MIDLANT		Communications	Tactical	relay (A)	Camp Lejeune-Ft AP Hill	
MIDLANT		Communications structure	Tactical	Establish and maintain liaison and comms facilities (G); establish and maintain liaison and comms facilities A); Install, maintain, operate structure to communicate to direct subordinates (A)	Camp Lejeune-Ft AP Hill	
MIDLANT		Data systems	Tactical	Maintain target and situation maps (G); maintain target data (G)	Camp Lejeune-Ft AP Hill	
MIDLANT		Threat forces	Tactical	Evacuate enemy POWs (A)	Camp Lejeune-Ft AP Hill	
MIDLANT		Engagement areas	Tactical	Finalize engagement areas (G)	Camp Lejeune-Ft Ap Hill	

Table 16. Required MEB training environmental and candidate supporting facilities for MIDLANT (continued)

	Environment object	Environmental requirement	Max warfare level	Supported actions	MIDLANT local training area	MIDLANT local area issue
MIDLANT		Fire control areas	Tactical	Establish and plan FSCMs (G); finalize FSCMs (G); disseminate fires info on unit loc, target info, FSCMs (G)	Camp Lejeune-Ft AP Hill	
MIDLANT		Fire support assets	Tactical	Coordinate (G); coordinate fires between supporting arms (G)	Camp Lejeune-Ft AP Hill	
MIDLANT		Fires	Tactical	Obtain info and intell from fire support missions (G); deliver fires on detected targets (G); clear fire request (G); integrate, coordinate fires to support scheme of maneuver (G); request additional FS when needed (G); resolve conflicts at lowest level (G)	Camp Lejeune-Ft AP Hill	
MIDLANT		Aviation assets	Tactical	Assign aircrew to aircraft (A); support assaults, raids, return to seabase with vertical lift (2015)(A); conduct preemptive air strikes (2015)(A); conduct tactics air support (2015)(A)	Camp Lejeune-Ft AP Hill	
MIDLANT		Maneuver areas	Tactical	Establish triggers (G); finalize triggers (G)	Camp Lejeune-Ft AP Hill	
MIDLANT		Maneuver elements	Tactical	Integrate, coordinate fires to support scheme of maneuver (G); disseminate fires info on unit loc, target info, FSCMs (G); evacuate casualties (A); conduct single and dual Bn assaults (2015)(G); coordinate with seabase and Bns (2015)(G); coordinate simultaneous Bn assaults (2015)(C); transfer control to USA (2015)(C); coordinate with SOF ashore, seabase and maneuver elements ashore (2015)(A);coordinate with seabase and maneuver elements ashore (2015)(S)	Camp Lejeune-Ft AP Hill	
MIDLANT		Observers	Tactical	Coordinate fires between supporting arms (G)	Camp Lejeune-Ft AP Hill	

Table 16. Required MEB training environmental and candidate supporting facilities for MIDLANT (continued)

	Environment object	Environmental requirement	Max warfare level	Supported actions	MIDLANT local training area	MIDLANT local area issue
MIDLANT		Targets	Tactical	Finalize high priority target acquisition, tracking, attack, and assessment (G); reassign (G); conduct target acquisition, assessment (G); Consolidate, evaluate, display target info and intell (G); recommend classification and attack priorities (G); maintain and provide lists to SA reps (G); prepare bulletins after amphib force control passed ahore (G); merge subordinate lists into MAGTF list (G); deliver fires on detected targets (G); disseminate fires info on unit loc, target info, FSCMs (G)	Camp Lejeune-Ft AP Hill	
MIDLANT	Maneuver areas	Log support forces	Tactical	Employ CSSE dets in direct support to GCE maneuver elements and ACE units (S); provide mobile CSS dets to maneuver elements (2015)(S); support maneuver elements, support USA units (2015)(S)	Camp Lejeune-Ft AP Hill	
MIDLANT		Fire support assets	Tactical	Coordinate positioning (G); coordinate air missions integrated with ground and supporting arms (A)	Camp Lejeune-Ft AP Hill	
MIDLANT		Friendly aircraft	Tactical	Coordinate and direct air supporting ground ops (A); coordinate air missions integrated with ground and supporting arms (A); coordinate aircraft actions (A); provide terminal control of aircraft supporting offensive ops (A)	Camp Lejeune-Ft AP Hill	
MIDLANT		Terminal control assets	Tactical	Manage terminal control assets (A)	Camp Lejeune-Ft AP Hill	
MIDLANT	Engagement areas	Fires	Tactical	Coordinate specialized munitions delivery (G); plan and coordinate Co fires (G); control artillery and NSFS missions (A); control artillery and NSFS missions (A)	Camp Lejeune G-10, Ft AP Hill	Ft Bragg Sim NSFS(A,G); single Lejeune impact area

Table 16. Required MEB training environmental and candidate supporting facilities for MIDLANT (continued)

	Environment object	Environmental requirement	Max warfare level	Supported actions	MIDLANT local training area	MIDLANT local area issue
MIDLANT		Observers	Tactical	Coordinate observation coverage (G)	Camp Lejeune G-10, Ft AP Hill	
MIDLANT		Targets	Tactical	Recommend attack (G)	Camp Lejeune G-10, Ft AP Hill	
MIDLANT	Landing zone	Maneuver r elements	Tactical	Facilitate landing and movement (A);	Camp Lejeune-Ft AP Hill	
MIDLANT		Resources	Tactical	Facilitate landing and movement equipment (A); facilitate landing and movement of supplies (A)	Camp Lejeune-Ft AP Hill	
MIDLANT	Port	Maneuver elements	Tactical	Seize and secure ports, port cities, airfields (2015)(G)	Savannah, GA	simulated seisure/constructive
MIDLANT	Airfield	Maneuver elements	Tactical	Seize and secure ports, port cities, airfields (2015)(G)	MCALF Bogue	
MIDLANT	Mountain-ous area	Maneuver elements	Tactical	Bn assault inland and mountain-ous objectives (2015)(G)	None	No mountain terrain
MIDLANT	Inland area	Maneuver elements	Tactical	Bn assault inland and mountain-ous objectives (2015)(G)	Ft AP Hill	
MIDLANT	Beach	Maneuver elements	Tactical	Conduct amphibious assaults at night(2015)(G)	Camp Lejeune	
MIDLANT	Urban	Maneuver elements	Tactical	Seize and secure ports, port cities, airfields (2015)(G)	Camp Lejeune	
MIDLANT	Deep	Resources	Tactical	Collect and display sensor info (A)	Ft AP Hill	
MIDLANT	Rear	Maneuver elements	Tactical	Provide rear area security and air defense (A)	MCAS Beaufort	
MIDLANT		Log facilities	Tactical	Establish maintenance, parking, staging and warehousing areas (S)	MCAS Beaufort	
MIDLANT		Fires	Tactical	Coordinate and clear rear area fire missions (G)	MCAS Beaufort	
MIDLANT	Bde AOR	Communications structure	Tactical	Operate FSC nets (G); establish and maintain liaison and comms facili-ties (G)	Ft AP Hill	
MIDLANT		Maneuver elements	Tactical	Conduct multiple simultaneous Bn assaults and raids on multiple and single targets(2015)(G); conduct surface and vertical assults(2015)(G)	Ft AP Hill	Lejeune supports only Co maneuver-fire, Ft Bragg Rn?

Table 16. Required MEB training environmental and candidate supporting facilities for MIDLANT (continued)

	Environment object	Environmental requirement	Max warfare level	Supported actions	MIDLANT local training area	MIDLANT local area issue
MIDLANT		Aviation assets	Tactical	Conduct multiple simultaneous Bn assaults and raids on multiple and single targets(2015)(G); conduct surface and vertical assults(2015)(G)	Ft AP Hill	
MIDLANT		Fire support assets	Tactical	Allocate attack assets (G); allocate fire support assets to Bns (CAS, NSFS…) (G); coordinate employment (G)	Ft AP Hill	
MIDLANT		Fires	Tactical	Plan, request (G); Monitor clearance (G); coordinate (G)	Ft AP Hill	All Lejeune NSFS, Air, Arty to G10
MIDLANT		Resources	Tactical	Perform targeting process (G)	Ft AP Hill	
MIDLANT		Targets	Tactical	Develop targets with own asset (G)	Ft AP Hill	
MIDLANT	Bn AOR	Fire support assets	Tactical	Coordinate Co maneuver scheme with supporting arms (G)	Camp Lejeune	Supports only Co maneuver-fire
MIDLANT		Fires	Tactical	Call for and adjust arty, NSFS, mortar fires (G)	G-10	
MIDLANT		Maneuver elements	Tactical	Coordinate ME with supporting arms (G); conduct air, surface, and vertical assaults, raids, feints, unit relief, and link-up (2015)(G)	G-10	
MIDLANT		Aviation assets	Tactical	Conduct air, surface, and vertical assaults, raids, feints, unit relief, and link-up (2015)(G)	G-10	
MIDLANT	Landbased air supply area	EAF	Tactical	Employ CSSE dets in direct support to GCE maneuver elements and ACE units (S); transport ACE supplies from MAGTF point of entry to EAF (A)	MCALF Bogue	
MIDLANT	Airspace	Air routes	Tactical	Recommend air routing (A)	R3506, Cherry Point TACTS	
MIDLANT		Air sector	Tactical	Monitor manage and control sector to include AOR, AEC, FOB(A)	R3506, Cherry Point TACTS	
MIDLANT		Air support assets	Tactical	Request and control air support (A)	R3506, Cherry Point TACTS	

Table 16. Required MEB training environmental and candidate supporting facilities for MIDLANT (continued)

	Environment object	Environmental requirement	Max warfare level	Supported actions	MIDLANT local training area	MIDLANT local area issue
MIDLANT		Friendly aircraft	Tactical	Exercise procedural control of transiting aircraft (A); control and manage (A); intercept hostile missiles and aircraft (A); direct, positively control and provide navigation assistance for friendly aircraft (A)	R3506, Cherry Point TACTS	
MIDLANT		Hostile aircraft	Tactical	Detect, identify, and intercept (A)	R3506, Cherry Point TACTS	
MIDLANT		Resources	Tactical	Reconnoitre and surveil airspace (A)	R3506, Cherry Point TACTS	
MIDLANT	Air defense zones	Air defense assets	Tactical	Manage and coordinate air defense weapons (A); provide fires for forward combat elements, special ops, vital areas, and installations (A); coordinate detection in zones (A); manage air defense weapons (A)	Lejeune R3506, Ft Bragg R5311	
MIDLANT	Air routes	Friendly aircraft	Tactical	Transport ACE supplies from MAGTF point of entry to EAF (A)	Savannah-Lejeune-Cherry Point-Bouge	

Table 17. Required MEB training environmental and candidate supporting facilities for COMEX

	Environment object	Environmental requirement	Max warfare level	Supported actions	GOMEX local training area	GOMEX local issue
GOMEX	Phase	Future events	Operational	Plan next mission (C), Plan branches and sequals (C), Plan next battle (C), determine deployment sequence (S)	Time: At least two sequential Bn-scale battles for operational, one for tactical	Co size maneuver Eglin, Ft Polk For Deep battles
GOMEX		Targets	Operational	Develop future targets (G)	Same as above	
GOMEX		Fire support operations	Operational	Plan, integrate, coordinate current and future Rn scheme of maneuver (G)	Same as above	
GOMEX		Maneuver elements	Operational	Plan, integrate, coordinate arms supporting current and future Rn scheme of maneuver (G)	Same as above	
GOMEX		Resources	Operational	Reallocate for COAs(C), develop future intell asset placement (G), determine deployment sequence and priorities (S)	Same as above	
GOMEX	Theater	Battlespace	Operational	Develop missions (C); recommend joint airspace changes (C), consider impact on logistics (S); coordinate terrain management (C)	Greater Eglin area	
GOMEX		Threat forces	Operational	Assess shaping (C), neutralize air threats (A)	Greater Eglin area	
GOMEX		Targets	Operational	Develop list, recommend, acquire, prioritize (G); find, track, engage (G)	Greater Eglin area	
GOMEX		Joint Force	Operational	Coordinate with (A)	Greater Eglin area	
GOMEX		Operations	Operational	Plan air ops (A), coordinate air ops with GCE and CSSE (A), integrate air fires with ground ops (A); monitor (C); support maneuver elements from seabase(2015); plan assaults, raids, feints, security operations (2015)(G); direct assaults, raids, feints, security operations, movement of seabase, split seabase ops, relief of USA units (2015)(C)	Greater Eglin area	
GOMEX		Fire control areas	Operational	Determine FSCMs(C), establish and maintain FSCMs(A)	Greater Eglin area	

Table 17. Required MEB training environmental and candidate supporting facilities for COMEX (continued)

	Environment object	Environmental requirement	Max warfare level	Supported actions	GOMEX local training area	GOMEX local issue
GOMEX		Maneuver elements	Operational	Integrate air fires with maneuver (A); coordinate with maneuver elements ashore, higher HQ (2015)(C)	Greater Eglin area	
GOMEX		Fire support operations	Operational	Translate data into capabilities (G), integrate with ground maneuver (A); make and monitor allocations (G), integrate air fires with maneuver (A)	Greater Eglin area	
GOMEX		Sorties	Operational	Discuss excess with JFC(C); recommend apportionment (C), request, distribute, control (A)	Greater Eglin area	
GOMEX		Aviation assets	Operational	Keep as direct support (C); command and control, maintain, provide logistics, assess serviceability (A)	Greater Eglin area	
GOMEX		Resources	Operational	Request (G), redirect, integrate, synchronize (C), identify R&S requirements (C), plan, coordinate, and manage supporting assets (A); monitor status of forces and materials (C), assess nonorganic intell assets (G); allocate resources (2015)(C)	Greater Eglin area	
GOMEX		Log facilities	Operational	Determine location and size (S); develop (S), establish mobility control centers (S)	Greater Eglin area	
GOMEX		Log sources, assets and supplies	Operational	Identify, determine critical and vital, plan LOC movement (S), source requirements (S); control offloaded throughput (S), distribute equipment (S); support maneuver elements from seabase(2015)	Greater Eglin area	
GOMEX		Log support forces	Operational	Organize, prepare log elements (S); coordinate and supervise closure (S), allocate intratheater transport (S), control MPF movements (S); conduct at-sea arrival and assembly(2015); coordinate with seabased support elements (2015)(C)	Greater Eglin area	

Table 17. Required MEB training environmental and candidate supporting facilities for COMEX (continued)

	Environment object	Environmental requirement	Max warfare level	Supported actions	GOMEX local training area	GOMEX local issue
GOMEX	Host nation	Log sources, assets and supplies	Operational	Determine, identify, and evaluate (S); coordinate support (S)	Pensacola, FL	
GOMEX	Sea area	Seabase	Operational	Conduct at-sea arrival and assembly (2015); Support maneuver elements from seabase(2015); direct assaults, raids, feints, security operations, movement of seabase, split seabase ops, relief of USA units (2015); coordinate with seabased support elements (2015)	GOMEX OPAREA	Amphibs as seabase (2015)
GOMEX	Deep	Fire support operations	Operational	Plan and coordinate (G); conduct fire support (G)	Ft Polk JRTC or Avon Park	
GOMEX		Maneuver elements	Operational	Conduct fire support (G)	Ft Polk JRTC or Avon Park	
GOMEX		Threat forces	Operational	Shape (A)	Ft Polk JRTC or Avon Park	
GOMEX		Operations	Operational	Control air operations (A)	Ft Polk JRTC or Avon Park	
GOMEX	Close	Fire support operations	Operational	Plan and coordinate (G); conduct fire support (G)	Eglin MTRFB	
GOMEX		Log facilities	Operational	Establish forward bases (S)	Eglin MTRFB	
GOMEX	Rear	Operations	Operational	Monitor (C)	NAS Pensacola	
GOMEX		Fire support operations	Operational	Plan and coordinate (G); conduct fire support (G)	NAS Pensacola	No fire support (A,G) or close and rear fire support at Eglin MTRFB
GOMEX		Maneuver elements	Operational	Conduct fire support (G)	NAS Pensacola	No fire support (A,G)
GOMEX		Log facilities	Operational	Establish combat support area (S)	NAS Pensacola	
GOMEX		Log sources, assets and supplies	Operational	Receive and store supplies (S)	NAS Pensacola	
GOMEX	Port	Log facilities	Operational	Plan embarkation points location and time (S)	Port of Pensacola	
GOMEX		Maneuver elements	Operational	Identify embarkation location and time (S); conduct fire support (G)	Port of Pensacola	No fire support(A,G)
GOMEX		Log support forces	Operational	Prep for MPF arrival (S), control log control groups (S)	Port of Pensacola	

Table 17. Required MEB training environmental and candidate supporting facilities for COMEX (continued)

	Environment object	Environmental requirement	Max warfare level	Supported actions	GOMEX local training area	GOMEX local issue
GOMEX		Log movement	Operational	Convoy MPE/S and personnel (S), unload ships (S)	Port of Pensacola	
GOMEX	Beach	Log support forces	Operational	Prep for MPSRON arrival (S), control log control groups (S)	Eglin MTRFB	
GOMEX	Airfield	Log movement	Operational	Control offload (S)	NAS Pensacola	
GOMEX		Log support forces	Operational	Form and dispatch convoys (S), operate log control groups (S)	NAS Pensacola	
GOMEX	LOCs	Log movement	Operational	Plan, route, schedule, control (S)	Pensacola-Eglin-Polk or Avon Park	350 NM Pensacola-Polk
GOMEX	Sea area	Seabase	Tactical	Serve as reserve force (2015)(G); coordinate with seabase and Bns (2015)(G); operate from seabase (2015) (C, G, A, S); coordinate with seabase and maneuver elements ashore (2015)(S)	Offshore Eglin	Amphibs as seabase (2015)
GOMEX	Battle area	Air support assets	Tactical	Prioritize, prepare, forward, coordinate air support requests (G)	Eglin-Polk or Avon Park	
GOMEX		Aviation assets	Tactical	Coordinate (A)	Eglin-Polk or Avon Park	
GOMEX		Communications	Tactical	Relay (A)	Eglin-Polk or Avon Park	
GOMEX		Communications structure	Tactical	establish and maintain liaison and comms facilities (G); establish and maintain liaison and comms facilities (A); Install, maintain, operate structure to communicate to direct subordinates (A)	Eglin-Polk or Avon Park	
GOMEX		Data systems	Tactical	Maintain target and situation maps (G); maintain target data (G)	Eglin-Polk or Avon Park	
GOMEX		Threat forces	Tactical	Evacuate enemy POWs (A)	Eglin-Polk or Avon Park	
GOMEX		Engagement areas	Tactical	Finalize engagement areas (G)	Eglin-Polk or Avon Park	Non-adjacent indirect fires and maneuver (G,A)
GOMEX		Fire control areas	Tactical	Establish and plan FSCMs (G); finalize FSCMs (G); disseminate fires info on unit loc, target info, FSCMs (G)	Eglin-Polk or Avon Park	Non-adjacent indirect fires and maneuver (G,A)
GOMEX		Fire support assets	Tactical	Coordinate (G); coordinate fires between supporting arms (G)	Eglin-Polk or Avon Park	

Table 17. Required MEB training environmental and candidate supporting facilities for COMEX (continued)

	Environment object	Environmental requirement	Max warfare level	Supported actions	GOMEX local training area	GOMEX local issue
GOMEX		Fires	Tactical	Obtain info and intell from fire support missions (G); deliver fires on detected targets (G); clear fire request (G); integrate, coordinate fires to support scheme of maneuver (G); request additional FS when needed (G); resolve conflicts at lowest level (G)	Eglin-Polk or Avon Park	Non-adjacent indirect fires and maneuver (G,A)
GOMEX		Aviation assets	Tactical	Assign aircrew to aircraft (A); support assaults, raids, return to seabase with vertical lift (2015)(A); conduct preemptive air strikes (2015)(A); conduct tactics air support (2015)(A)	Eglin-Polk or Avon Park	
GOMEX		Maneuver areas	Tactical	Establish triggers (G); finalize triggers (G)	Eglin-Polk or Avon Park	
GOMEX		Maneuver elements	Tactical	Integrate, coordinate fires to support scheme of maneuver(G); disseminate fires info on unit loc, target info, FSCMs (G); evacuate casualties (A); conduct single and dual Bn assaults (2015)(G); coordinate with seabase and Bns (2015)(G); coordinate simultaneous Bn assaults (2015)(C); transfer control to USA (2015)(C); coordinate with SOF ashore, seabase and maneuver elements ashore (2015)(A);coordinate with seabase and maneuver elements ashore (2015)(S)	Eglin-Polk or Avon Park	Non-adjacent indirect fires and maneuver (G,A)
GOMEX		Observers	Tactical	Coordinate fires between supporting arms (G)	Eglin-Polk or Avon Park	

Table 17. Required MEB training environmental and candidate supporting facilities for COMEX (continued)

	Environment object	Environmental requirement	Max warfare level	Supported actions	GOMEX local training area	GOMEX local issue
GOMEX		Targets	Tactical	Finalize high priority target acquisition, tracking, attack, and assessment (G); reassign (G); conduct target acquisition, assessment (G); Consolidate, evaluate, display target info and intell (G); recommend classification and attack priorities (G); maintain and provide lists to SA reps (G); prepare bulletins after amphib force control passed ahore (G); merge subordinate lists into MAGTF list (G); deliver fires on detected targets (G); disseminate fires info on unit loc, target info, FSCMs (G)	Eglin-Polk or Avon Park	
GOMEX	Maneuver areas	Log support forces	Tactical	Employ CSSE dets in direct support to GCE maneuver elements and ACE units (S); provide mobile CSS dets to maneuver elements (2015)(S); support maneuver elements, support USA units (2015)(S)	Eglin-Polk or Avon Park	
GOMEX		Fire support assets	Tactical	Coordinate positioning (G); coordinate air missions integrated with ground and supporting arms (A)	Eglin-Polk or Avon Park	
GOMEX		Friendly aircraft	Tactical	Coordinate and direct air supporting ground ops (A); coordinate air missions integrated with ground and supporting arms (A); coordinate aircraft actions (A); provide terminal control of aircraft supporting offensive ops (A)	Eglin-Polk or Avon Park	
GOMEX		Terminal control assets	Tactical	Manage terminal control assets(A)	Eglin MTRFB West	
GOMEX	Engagement areas	Fires	Tactical	Coordinate specialized munitions delivery (G); plan and coordinate Co fires(G); control artillery and NSFS missions (A); control artillery and NSFS missions (A)	Eglin MTRFB West (direct), East (indirect)	Non-adjacent indirect fires and maneuver (G,A); Sim NSFS
GOMEX		Observers	Tactical	Coordinate observation coverage (G)	Eglin MTRFB West (direct), East (indirect)	

Table 17. Required MEB training environmental and candidate supporting facilities for COMEX (continued)

	Environment object	Environmental requirement	Max warfare level	Supported actions	GOMEX local training area	GOMEX local issue
GOMEX		Targets	Tactical	Recommend attack (G)	Eglin MTRFB West (direct), East (indirect)	
GOMEX	Landing zone	Maneuver elements	Tactical	Facilitate landing and movement (A);	Eglin MTRFB, Ft Polk or Avon Park	
GOMEX		Resources	Tactical	Facilitate landing and movement equipment (A); facilitate landing and movement of supplies (A)	Eglin MTRFB, Ft Polk or Avon Park	
GOMEX	Port	Maneuver elements	Tactical	Seize and secure ports, port cities, airfields (2015)(G)	Port of Pensacola	simulated seisure
GOMEX	Airfield	Maneuver elements	Tactical	Seize and secure ports, port cities, airfields (2015)(G)	Eglin MTRFB	
GOMEX	Mountainous area	Maneuver elements	Tactical	Bn assault inland and mountainous objectives (2015)(G)	None	No mountain terrain
GOMEX	Inland area	Maneuver elements	Tactical	Bn assault inland and mountainous objectives (2015)(G)	Ft Polk or Avon Park	
GOMEX	Beach	Maneuver r elements	Tactical	Conduct amphibious assaults at night (2015)(G)	Eglin MTRFB	
GOMEX	Urban	Maneuver elements	Tactical	Seize and secure ports, port cities, airfields (2015)(G)	Eglin MTRFB, Ft Polk or Avon Park	
GOMEX	Deep	Resources	Tactical	Collect and display sensor info (A)	Polk or Avon Park	
GOMEX	Rear	Maneuver elements	Tactical	Provide rear area security and air defense (A)	NAS Pensacola	Sim air defense
GOMEX		Log facilities	Tactical	Establish maintenance, parking, staging and warehousing areas (S)	NAS Pensacola	
GOMEX		Fires	Tactical	Coordinate and clear rear area fire missions (G)	NAS Pensacola	Sim rear fires
GOMEX	Bde AOR	Communications structure	Tactical	Operate FSC nets (G); establish and maintain liaison and comms facilities (G)	Eglin MTRFB Ft Polk or Avon Park	
GOMEX		Maneuver elements	Tactical	Conduct multiple simultaneous Bn assaults and raids on multiple and single targets(2015)(G); conduct surface and vertical assults(2015)(G)	Eglin MTRFB Ft Polk or Avon Park	B70, B75, C72?; Ft Polk?

Table 17. Required MEB training environmental and candidate supporting facilities for COMEX (continued)

	Environment object	Environmental requirement	Max warfare level	Supported actions	GOMEX local training area	GOMEX local issue
GOMEX		Aviation assets	Tactical	Conduct multiple simultaneous Bn assaults and raids on multiple and single targets(2015)(G); conduct surface and vertical assults(2015)(G)	Eglin MTRFB Ft Polk or Avon Park	
GOMEX		Fire support assets	Tactical	Allocate attack assets(G); allocate fire support assets to Bns (CAS, NSFS…) (G); coordinate employment (G)	Eglin MTRFB Ft Polk or Avon Park	
GOMEX		Fires	Tactical	Plan, request (G); Monitor clearance (G); coordinate (G)	Eglin MTRFB Ft Polk or Avon Park	C-52N, C, W; not proximate maneuver areas
GOMEX		Resources	Tactical	Perform targeting process (G)	Eglin MTRFB Ft Polk or Avon Park	
GOMEX		Targets	Tactical	Develop targets with own assets (G)	Eglin MTRFB Ft Polk or Avon Park	
GOMEX	Bn AOR	Fire support assets	Tactical	Coordinate Co maneuver scheme with supporting arms (G)	Eglin MTRFB	Eglin 2 independent Bn
GOMEX		Fires	Tactical	Call for and adjust arty, NSFS, mortar fires (G)	Eglin C 52	Sim NSFS Eglin, maneuver and indirect fires areas not proximate
GOMEX		Maneuver elements	Tactical	Coordinate ME with supporting arms (G); conduct air, surface, and vertical assaults, raids, feints, unit relief, and link-up (2015)(G)	Eglin MTRFB	
GOMEX		Aviation assets	Tactical	Conduct air, surface, and vertical assaults, raids, feints, unit relief, and link-up (2015)(G)	Eglin MTRFB	
GOMEX	Landbased air supply area	EAF	Tactical	Employ CSSE dets in direct support to GCE maneuver elements and ACE units (S); transport ACE supplies from MAGTF point of entry to EAF(A)	Eglin MTRFB	
GOMEX	Airspace	Air routes	Tactical	Recommend air routing (A)	R29xx, W151	
GOMEX		Air sector	Tactical	Monitor manage and control sector to include AOR, AEC, FOB(A)	R29xx, W152	
GOMEX		Air support assets	Tactical	request and control air support (A)	R29xx, W153	
GOMEX		Friendly aircraft	Tactical	Exercise procedural control of transiting aircraft (A); control and manage (A); intercept hostile missiles and aircraft (A); direct, positively control and provide navigation assistance for friendly aircraft (A)	R29xx, W154	
GOMEX		Hostile aircraft	Tactical	Detect, identify, and intercept(A)	R29xx, W155	

Table 17. Required MEB training environmental and candidate supporting facilities for COMEX (continued)

	Environment object	Environmental requirement	Max warfare level	Supported actions	GOMEX local training area	GOMEX local issue
GOMEX		Resources	Tactical	Reconnoitre and surveil airspace (A)	R29xx, W156	
GOMEX	Air defense zones	Air defense assets	Tactical	Manage and coordinate air defense weapons (A); provide fires for forward combat elements, special ops, vital areas, and installations (A); coordinate detection in zones (A); manage air defense weapons (A)	W151	
GOMEX	Air routes	Friendly aircraft	Tactical	Transport ACE supplies from MAGTF point of entry to EAF(A)	Pensacola-Eglin	

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Appendix E

Tables 18-19 lists the primary training audience identified in Marine Corps warfighting publications listed in table 6. Table 17 lists the commands, agencies, staffs, and individuals supporting the primary training audience. These supporting training elements are frequently a secondary training audience to increase the efficiency of a training event.

1

Table 18. MAGTF primary training audience

Command Element	GCE	ACE	CSSE
Command Element	GCE, Air Section	ACE	FSSG, Arrival & Assembly
CE as MARFOR	GCE, Fire Support Coordination Section	ACE, ACE MALS	Operations Group
CE, Battlestaff	GCE, FSCC	ACE, ASC(A)	FSSG, Arrival Airfield Control
CE, Current ops section	GCE, Naval Gunfire Section	ACE, Combat Service Support	Group
CE, Future ops section	GCE, Target Information Section	Detachment	FSSG, Arrival and Assembly
CE, Future plans section	Senior GCE FSCC	ACE, DASC	Operations Element
	FSC, Division (highest S-2)	ACE, FAC(A)	FSSG, CSSE
	FSC, FFCC targeting cell	ACE, HST	FSSG, Movement Control
	FSC, G-2/S-3	ACE, Low Altitude Air Defense	Center
	FSC, G-2/S-4	ACE, Marine Air Traffic Control	FSSG, Port Operations Group
	FSC, Target Information Section	Detachments	
	Rn FSCC	ACE, Marine Wing Communications	
	Rn FSCC, Liaison Section	Squadron	
	Rn FSCC, NSFS Liaison Team	ACE, MWSS	
	Bn FSCC, 81mm Mortar Platoon Repre-	ACE, SAAWC	
	sentative	ACE, SQUADRONS	
	Bn FSCC, Liaison Section	ACE, TAC(A)	
	Bn FSCC, Shore Fire Control Party	ACE, TACC	
	Rear Area Operations, Rear Area	ACE, TACP	
	Operations Center	ACE, TAOC	

Table 19. Elements supporting primary MAGTF training audience

A/C
ACE squadrons
Agencies
Air Force air operations center,
Control, and reporting center
Air mission commander
Airborne Early Warning assets
Aircraft
Aircrew
Amphibious force
Appropriate supporting arms agencies
Artillery unit S-2
Assault force
Camp commandant
CATF
Companies
COMMARFOR
Component commanders
CSSD
CSSE staffs
Elements of the MACCS
FACs
FFCC
Firing units
FIST
FSC
higher headquarters
Host Nation
Host-nation, national, and inter
National civil air traffic control agencies
Intelligence cells
JAOC
JFACC
JFC
JFC chief of contracting
JFLCC
JIC
JMC
Joint agencies
Joint Force Surgeon
JRSOI
JTF
LAAD Stinger teams
Landing force
Liaison
MACG
MAG commanding officer
MAGTF
MAGTF CE
MAGTF commander
MAGTF elements
MAGTF target intelligence officer
MARFOR
Marine forces
MPF forces
Multinational agencies"
MWSG
MWSS
Navy TACC
Regiment
Representative
SACC
Service components
Shipping and strategic aircraft
Squadrons
Staff
Staffs
Strategic logistics support agencies
Subordinate commanders
Subordinate commands
Subordinate FSCs
Supporting arms representatives
Supporting arms reps
Tactical air control elements
Theater Support Command (Army)
TRANSCOM

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Appendix F

Figure 18. FM 34-130 estimated advance rates

Degree of Resistance Attacker to Defender Radio	PREPARED DEFENSE[3]						HASTY DEFENSE/DELAY[4]					
	UNRESTRICTED TERRAIN		RESTRICTED TERRAIN		SEVERELY RESTRICTED TERRAIN		UNRESTRICTED TERRAIN		RESTRICTED TERRAIN		SEVERELY RESTRICTED TERRAIN	
	Armor/Mech	Inf	Armor/Mech	Inf	Armor/Mech	Inf	Armor/Mech	Inf	Armor/Mech	Inf	Armor/Mech	Inf
Intense Resistance 1:1	.6	.5	.5	.3	.15	.1	1.0	.8	.8	.5	.4	.2
Very Heavy 2:1	.9	.6	.6	.4	.3	.2	1.5	1.0	1.0	.7	.6	.3
Heavy 3:1	1.2	.7	.75	.5	.5	.3	2.0	1.2	1.3	.9	.8	.5
Medium 4:1	1.4	.8	1.0	.6	.5	.5	2.4	1.4	1.75	1.1	.9	.8
Light 5:1	1.5	.9	1.1	.7	.6	.5	2.6	1.6	2.0	1.2	1.0	.9
Negligible 6+:1	1.7+	1.0+	1.3+	.8+	.6+	.6+	3.0+	1.7+	2.3+	1.3+	1.1+	1.0

Source: Adapted from **CACDA Jiffy III War Game, Vol II, Methodology**.

[1] Units cannot sustain these rates for 24 hours. These rates are reduced by 1/2 at night.

[2] The relative combat power ratio must be computed for the unit under consideration.

[3] When there is surprise, multiply these figures by a surprise factor as follows:
— **Complete** Surprise x 5 (e.g., Germans at the Ardennes in 1944, Arabs in 1973).
— **Substantial** Surprise x 3 (e.g. German invasion of Russia in 1941, Israeli invasion of Sinai in 1967).
— **Minor** Surprise x 1.3 (e.g., Allied Normandy landing in 1944, Pakistani attack on India in 1971).
The effects of surprise last for 3 days, being reduced by one-third on day 2 and two-thirds on day 3.

[4] Prepared defense is based on defender in prepared positions (24 hours or more).

5 Hasty defense is based on 2 to 12 hours' preparation time.

[6] The ratios used here are to determine the degree of resistance. There is no direct relationship between advance rates and force ratios. However, **sustained advances** probably are not possible without a 3 to 1 ratio. Advance is possible against superior forces but cannot be sustained.

[7] Rates greater than 6 to 1 will result in advances between these and the unopposed rates.

Figure B-41. Brigades and below opposed rates of advance, in km/h.

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[1] CAB D0009618.A1/Final, *MEB Training Exercise Study: Identifying MEB Training Requirements*, by A. Brown, J. Ezring, and L. Geis, Jan 2004, Unclassified.

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