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DEPARTMENT OF THE NAVY  
HEADQUARTERS UNITED STATES MARINE CORPS  
WASHINGTON 25, D.C.

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15 JUN 1965

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From: Commandant of the Marine Corps  
To: Chief of Naval Operations

Subj: Marine Corps Aviation Program, FY 1965-1975 (U)

Ref: (a) CMC ltr Ser: 008C15764 of 6 Aug 1964

Encl: (1) Update of Marine Corps Aviation Program Document

1. Enclosure (1) contains the Marine Corps Aviation Program Document, Fiscal years 1965-1975 and cancels and supersedes the Marine Corps Aviation Program, Fiscal years 1964-1974 forwarded by reference (a).

2. The Marine Aviation Program FY 1965-1975 contains the following information for both the three active Marine Aircraft Wings (MAWs) and the Fourth Reserve MAW:

a. Assignment, distribution, and overseas rotation schedule of aircraft and equipment authorized in the Secretary of Defense Five Year Force Structure and Financial Program (FYFS&FP).

b. Assignment, distribution and overseas rotation schedule of aircraft and equipment required to meet Marine Program Objectives (POs) where these POs differ from the FYFS&FP.

c. Aircraft and related systems and equipment under research, development, test and evaluation to support Marine objectives.

d. Manpower required to support both the structure approved in the FYFS&FP as well as to meet Marine POs where these differ from the FYFS&FP.

e. Training required for flight crews and maintenance personnel to support the introduction of new aircraft and equipment.

f. Detailed description of material items, including aircraft, authorized in the FYFS&FP and required to fulfill Marine objectives.

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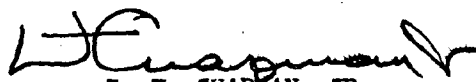
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g. Military construction programmed for Marine aviation installations. Construction requested but not yet programmed is also included.

3. The Aviation Program Document FY 1965 - 1975 is approved for planning purposes within this Headquarters. Subject to your concurrence, it is requested that the program be incorporated into the overall Naval Aviation Program.

  
L. F. CHAPMAN, JR.  
Chief of Staff

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PART IIntroduction

## Program Description

01. Purpose.

1. To provide information for internal management. It is used to:
  - a. Display the force structure and resources required to support the Marine Corps Mid-Range Objectives Plan (MMROP); and its supporting rationale and justification.
  - b. Provide a source for development of program data for Marine Corps plans and provide input to Navy service programs as well as to fill any Departmental Program requirements.
  - c. Provide explanation (backup data) of information set forth in the Department of the Navy Five Year Force Structure and Financial Program (FYFS&FP).
2. To provide information and guidance to selected Marine Corps and Naval activities for the planning and support of the projected force structures, resources, and deployment of forces and equipment during the mid-range period.
3. This program is based upon the assumptions listed below and any changes in these will necessitate corresponding adjustments to the various sub-program contained herein.

02. Assumptions.

1. That the missions of Marine Aviation will remain unchanged.
2. That adequate personnel will be allocated to man the Aviation structure.
3. That programmed changes in the Aviation structure will be preceded by timely and appropriate budget action to provide trained personnel, aircraft and facilities as may be required for establishment of new units, introduction of new aircraft and/or weapons and changes in missions or tasks of existing units.

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4. Marine Corps Aviation support of amphibious operations will include operations by tactical squadrons operating from carriers as part of Carrier Aircraft Wings (CAW's) as well as operations from advanced air bases within support range of the amphibious objective area.
5. The execution of an amphibious operation will normally require participation by carrier based and/or land based aircraft particularly during the period just prior to the assault phase. After landing force aviation is established ashore and control is passed to the Landing Force Commander, the Attack Carrier Strike Force will normally depart the area to exploit the inherent mobility of the carrier by interdicting enemy routes of approach to the amphibious objective area.
6. The current Marine Corps concept of helicopter employment will remain essentially unchanged during the mid-range period.

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03. Scope.

1. The Aviation Program provides planning guidance for a ten year period through Fiscal Year 1975. The Troop and Organization sub-program contains the projected structure required for Marine Aviation to perform its assigned functions and tasks in support of the Division/Wing Teams during this ten year period. The other sub-programs set forth aircraft, manpower, training, material and installations requirements to effectively man, equip and support the projected Marine Aviation structure.

2. In addition to the Introduction, Part I, the Aviation Program contained herein is organized as follows:

<u>Part II</u>	<u>Sub-Programs</u>
Chapter I	Aviation Troop and Organization
Chapter II	Aviation R&D
Chapter III	Aviation Manpower
Chapter IV	Aviation Training
Chapter V	Aviation Material
Chapter VI	Aviation Installations

3. The Aviation Program provides for modest annual personnel increases due to the introduction of new aircraft and equipment. It provides for the orderly achievement of objectives by time phasing of structure increases in such a manner as to provide adequate lead time between the appropriate budget year and formation of additional units, delivery of new aircraft and equipment and the expansion of facilities.

04. Policy.

1. The basic principle on which all aviation policy is based is that the mission, functions, tasks, organization and employment of Marine Aviation shall be in consonance with and responsive to those of the Marine Corps as a whole.

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2. Mission: The primary function of Marine Corps Aviation is "To participate as the supporting air components of Fleet Marine Forces in the seizure and defense of advanced naval bases and for the conduct of such land operations as may be essential to the prosecution of a naval campaign; and, as a collateral function, to participate as an integral component of naval aviation in the execution of such other Navy functions as the fleet commanders so direct."

3. Functions: In the accomplishment of the foregoing, Marine Corps Aviation must be prepared to perform the following functions:

- a. Offensive air support.
- b. Anti-air warfare.
- c. Assault support.
- d. Aerial reconnaissance.
- e. Control of aircraft and missiles.

4. Command and Control. The Marine Corps Aviation component within a Marine Air-Ground Task Force will be contained within a single aviation command whose commander will be responsible to the air-ground task force commander. This does not preclude assignment of elements to specific subordinate commanders of the task force to meet the requirements of operational situations. During amphibious operations the commander of the aviation component will be the tactical air commander for the landing force.

5. Employment. The primary employment of Marine Corps Aviation is as the air component of the Marine Division/Wing Team. Employment of Marine Corps Aviation other than outlined above will be subject to the policies and doctrines, as applicable, of the command to which assigned.

6. Operations within a Unified Command Area.

- a. The concept of Marine Corps air operations within a unified or specified command area will be arrived at through prior agreement with the unified or specified commander concerned. Normally, such concept will include employment of Div/Wing

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as an integral combat unit with complete amphibious force freedom of action in offensive air operations within the objective area, with such extensions of that area as are necessary, particularly for anti-air warfare and reconnaissance.

b. Determination of the foregoing, including specific area of responsibility, will depend in each case upon a number of factors including geographical dispositions, tactical situation, type of operation and capabilities of assigned aircraft rather than upon the arbitrary establishment of a limiting radius of operations.

7. Expeditionary Aspects. Marine Corps combat Aviation will be organized, trained and equipped as a completely expeditionary air arm. It is this expeditionary aspect, implicit to its successful employment, which sets Marine Corps Aviation apart from other aviation organizations. It must be prepared to operate, after rapid establishment ashore, from minimal airfields within the objective area during the assault phase of an amphibious operation. It must also be prepared to operate from aircraft carriers in support of the amphibious operation. All units must give precedence to maintaining and improving the high order of mobility and flexibility required for expeditionary employment.

8. Carrier Employment Policy. OpNav Instruction 003125.1 of 31 August 1957, subject "Carrier employment for Aircraft, Fleet Marine Force, fixed-wing units" sets forth the following policy and objectives:

a. Marine Corps Aviation units have participated in carrier training and deployments for many years. The extent of this participation has varied dependent upon the world situation, force levels and the needs of the fleet. Marine Corps Aviation, because of the nature of its training, equipment and availability as an integral part of the fleet has always served as a ready source to provide or complement carrier based forces when required.

b. Since the primary mission of Marine Corps Aviation is the support of Marine Corps combat operations, Marine Corps doctrine envisions that Marine Corps Aviation will support the landing forces throughout an assault landing and subsequent operations. This support would be furnished initially by tactical aircraft squadrons operating from carriers as part of the Carrier

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Air Groups. As soon as practicable, additional Marine Corps air units would be deployed into airfields within, or contiguous to, the objective area to assume the aviation support tasks.

c. Commitments of carriers to ready strike forces, essential operations and training of Carrier Air Groups precludes the assignment of carriers exclusively to the support of amphibious operations. This does not however, lessen the requirements for or desirability of having carrier based Marine aircraft groups in support of Marine Corps landing forces during amphibious operations.

d. The OpNav Instruction referred to above has as its objective the following:

(1) Carrier qualification of selected Marine Corps Aviation Squadrons during squadron phase training cycle.

(2) Utilization of selected Marine Corps Squadrons as part of Carrier Air Wings during routine deployments. The size, number and complements of such squadrons will be determined by the cognizant Fleet Commander-in-Chief. A squadron so employed would be an integral part of the aircraft wing to which assigned.

(3) Carrier basing of selected Marine Corps Aviation during amphibious training exercises to the maximum practical extent.

(4) Support of amphibious assault during the landing with embarked Carrier Air Wings, using Marine Corps Aviation units to the maximum extent practicable. As soon as minimal airfields are available land-based Marine Corps air would be phased into the objective area.

05. Concept of Operations.

1. Fleet Marine Forces are organized into air-ground teams with the unique capability of projecting a tailored, self-contained military force ashore during an amphibious assault. A Marine Expeditionary Force (MEF) is composed of a Marine Division and a Marine Aircraft Wing (MAW) together with appropriate reinforcements. Other task organizations such as a Marine Expeditionary

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Brigade (MEB), consisting of a Regimental Landing Team and Composite Air Group, and a Marine Expeditionary Unit (MEU), consisting of a Battalion Landing Team and Tactical Squadron, will be formed for operational commitments requiring employment of lesser strength.

2. The internal structure of each element of these air-ground teams is carefully organized to complement and support the other. Firepower, mobility, quick reaction and a capability for combat operations independent of other land based forces are major objectives.

3. The comprehensive capabilities within each Marine Aircraft Wing are unique. No functional augmentation is required for the conduct of land based air combat operations. Its fixed-wing aircraft groups contain jet fighter/attack squadrons which provide local air superiority, close and deep air support and interdiction. One composite reconnaissance squadron with high performance aircraft provides multi-sensor imagery and electronic warfare in support of both air and ground units. Combat air defense is augmented by one organic missile battalion equipped with HAWK surface-to-air missiles. Another aircraft group, composed of four medium helicopter squadrons, one heavy helicopter squadron, and one light observation squadron, provides vertical lift mobility, observation, liaison, evacuation and many other services directly to the ground units. One squadron of fixed wing refueler/transport aircraft provides endurance/flight extension air-to-air refueling services for jet aircraft and limited airlift and resupply within combat zones.

4. Each of the aircraft groups assigned a Wing provides intermediate maintenance for assigned aircraft, complete field camp facilities, and necessary air base services including highly mobile control tower, ground controlled approach (GCA), and air navigation aids. The jet aircraft groups are being equipped with SATS components which make it possible for high performance aircraft to operate from 2000-3000 foot airfields in an expeditionary environment. (See Appendix 5 to Chapter V, Part II for details on SATS components and capabilities).

5. Three Marine Air Control Squadrons (MACS) in each Wing, equipped with mobile high power radars and comprehensive communication equipment provide air surveillance, intercept and control capabilities within the combat area.



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6. Marine Aviation units will be integrated into fleet commands and may operate from carriers or contiguous land bases during pre-assault and landing phases of amphibious operations. These air operations will commence at maximum stand-off ranges and will be moved closer and closer to the objective area as enemy defenses are rolled back. When suitable airfields are uncovered or sites for Short Airfields for Tactical Support (SATS) are established, Marine Aviation units will be moved into the area. Mobility and flexibility will be exploited to the fullest extent possible.

7. The Marine Aircraft Wing is an exceptionally flexible air combat organization, specifically equipped to provide a full range of combat air operations in a variety of areas without the requirement for prepositioning of support, control and logistic facilities. In conjunction with the Marine Division, it constitutes a carefully balanced combat force which, within the total combat capability of the team, represents an optimum package of military power responsive to a wide range of limited war tasks. In planning for the employment of Marine Corps air/ground teams, every effort should be directed toward maintaining the integrity of the team and exploiting its capabilities as a team. These air/ground teams normally contain all the essential elements for the command and control of an air/ground task force.

8. Functions of Marine Aircraft Wing.

a. From a functional standpoint the Marine Aircraft Wing is capable of tactical air support consisting of anti-air warfare, offensive air support, assault support, aerial reconnaissance, and control of aircraft and missiles.

(1) Anti-Air Warfare. The nature of amphibious operations requires that a relatively high degree of immunity from air and missile attack be achieved before surface elements can begin the ship-to-shore movement. This immunity must be maintained thereafter in order to permit operations to establish the beachhead. An effective anti-air warfare system includes use of fighter and airborne early warning aircraft for the extended range destruction of enemy airborne threats, surface-to-air missiles for close in defense, attack aircraft for destruction of airfields, radar and missile sites and, to a limited

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degree, against enemy aircraft, and adequate control facilities for the conduct of counter-air operations under all-weather conditions.

(2) Offensive Air Support. Prior to initiation of the assault phase of an amphibious operation, air attacks are conducted against enemy forces and defensive installations. After these attacks, the assault phase is commenced. During this phase, air attacks are continued and concentrated on those enemy forces which pose the most immediate threat to the landing. The offensive air support which is conducted for the Marine Expeditionary Force can be categorized as:

(a) Close air support, which embraces all air actions against hostile targets, including escort of helicopters, which are in the close proximity to friendly forces and which require detailed integration of each air mission with the fire and movement of those forces.

(b) Deep air support, which includes, pre-planned counter-air operations, armed reconnaissance, interdiction and attacks on enemy forces. These operations must be carried out relatively far into enemy held territory and under all-weather conditions. In addition to inflicting casualties, they are designed to disrupt communications and deny use of critical terrain and routes of approach.

(c) The conduct of airborne electronic warfare and communication countermeasures, both active and passive, in support of air and ground operations.

(3) Assault Support. In order to insure successful amphibious operations, the assault support provided encompasses a variety of tasks which include:

(a) A vertical assault airlift capability which will provide, as a minimum, initial lift for the landing of the assault elements of two RLT's (four BLT's), in each FMF, a distance of 50 miles radius within 60-90 minutes and which will provide tactical mobility and logistic support to forces ashore.

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(b) A modest fixed-wing assault airlift and an aerial refueling capability to support tactical operations and for the movement of tactical aircraft to the area of operations.

(c) A minimum of administrative, supply and support activities which will meet the essential support requirements of the tactical Aviation units.

(d) Front line reconnaissance observation, casualty evacuation and utility operations in support of Landing Force operations.

(4) Aerial Reconnaissance. Prior to, during and subsequent to the assault, there is a continuing requirement for all-weather area and battlefield reconnaissance and surveillance plus electronic warfare and communication countermeasure operations in support of the air-ground teams. This is achieved through employment of multi-sensory imagery, electronic and visual reconnaissance/surveillance and airborne observers.

(5) Control of Aircraft and Missiles. Air control facilities are required in order to provide a means of conducting all-weather close air support, positive control of all friendly aircraft in the objective area as well as control of aircraft and surface-to-air missiles assigned to the anti-air warfare role, and the early warning capability for passive air defense.

#### 9. Aircraft Utilization and Sortie Rate Planning Factors.

In developing planning factors dealing with sortie rate capabilities of Marine Corps Aircraft, employment during sustained operations (30 days or more) in a particular geographical area is considered representative.

a. The number of sorties which can be produced on a sustained basis can be determined by two methods:

First: By determining the maximum number of flying hours per month (utilization) which can be flown by a given aircraft. Once determined, these hours can be divided by average mission times and the quotient will indicate available monthly sorties. Total flying

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hours per month is derived from factors which include maintenance hours per flight hour, productive maintenance man hours per man per month, and the number of men required to maintain an aircraft for a specified flight hour rate.

Second: By determining the number of opportunities to fly during a representative period of time and then applying limiting factors. The number of opportunities to fly can be determined, for example, by assuming a 12 hour operating day. If sortie time is 2 hours and turn-around time is 3 hours a visual attack aircraft could fly three times if there were no required maintenance or attrition factors applied. This would indicate 90 sorties or 180 flight hours per month capability. In actual operations there may be losses, and in every case there will be maintenance and repair, sooner or later. Limiting factors which affect obtainable sortie rates are:

- Aircraft loss rate.
  - Time required to replace lost aircraft. (During sustained operations an equilibrium point may be reached wherein rate of replacement equals loss rate.)
  - Probability that a sortie results in a maintenance requirement.
  - Average number of hours required to complete a single maintenance job on an aircraft.
  - Number of days which will partially or completely restrict flying due to weather.
  - Probability of "in chocks" or airborne aborts.
- b. Both methods produce sortie rates. The first is a simple procedure, using a minimum of factors. The second, while more definitive with regard to limiting factors, does not take into account that there is a limit to the total number of hours which could be flown by an aircraft over a representative period. Sortie rates developed by either method should be considered maximums, developed to indicate capability.
- c. Because of simplicity the first method is preferred when determining sortie rates. It is also a useful tool in determining aircraft requirements for landing force aviation. Detailed discussion of utilization and sortie production follows.

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(1) Aircraft operations from carriers differ from land based operations in that there are alternating maximum effort periods and non-operating periods during carrier operations while land based operations are of a sustained nature.

(2) The land based operations will level out to a certain average flying hours per month. Within this average, each type of aircraft will have an average aircraft utilization in hours for the month with its peaks and dips around a mean time. This aircraft utilization rate is dependent on the characteristics of aircraft maintenance personnel allowance, and time for maintenance.

(3) Each aircraft has its own special degree of complexity and/or simplicity for maintenance. When an aircraft is developed the manufacturer develops time-motion studies to determine the amount of maintenance hours required for an hour of flight time. These studies are usually developed under controlled factory conditions with trained maintenance personnel. The Navy at Patuxent River NATC does a similar study when the aircraft is put through service test. The factory maintenance study is correlated with the service test for a military environment. The maintenance hours per flight hour derived from these studies and service test are basis for maintenance and operating personnel allowances. After fleet indoctrinations the experience of the operating forces is considered and the maintenance hours per flight hour can change. This change is reflected in the number of maintenance and operating personnel made available to the units or a change in the aircraft average utilization per month.

(4) If we assume that the maintenance hours per flight hour has stabilized or is a constant, we can increase the number of opportunities an aircraft can fly, or its availability, by putting more men to work on the aircraft concurrently. This will increase the utilization up to a certain point after which increasing personnel will not have any effect. At this point the maintenance work will have to be done in consecutive order.

(5) Another factor that influences aircraft utilization and doesn't depend on the number of personnel or the order of maintenance (consecutively or concurrently) is the productive maintenance hours per man per month. The longer men work on productive maintenance the less time an aircraft will remain out of commission, thereby increasing its average utilization.

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(6) The factors mentioned above that determine personnel and maintenance allowances and affect the aircraft utilization rate can be shown in the following formula.

$$\text{MO} - \frac{(\text{Maint. hrs/flt hr}) \times (\text{A/C utilization/mo.})}{\text{Productive Maint. man-hours/man/mo.}}$$

Maintenance and Operating factor (MO) is the number of enlisted personnel, by rating, required to maintain and operate one specific type aircraft for a specified flight hour utilization rate.

(a) Maintenance hours/flight hour is derived as mentioned above and can be considered a constant. It is the quotient of the number of maintenance man-hours expended over a given number of flight hours.

(b) Aircraft utilization/month is the desired average hours per aircraft assigned that a fleet unit is programmed to fly to maintain its combat proficiency with the number of maintenance personnel authorized.

(c) Productive maintenance man-hours per man per month is the number of hours per month that a maintenance man is normally available to perform work on an aircraft. For the Marine Aviation personnel this figure is a constant 120 hours during peacetime conditions.

d. Combat Aircraft Utilization

(1) In combat operations the aircraft utilization in the MO formula will change to get maximum use of the weapon system. The maintenance hours per flight hour will increase slightly due to combat damage, however, attrition rates permit maintenance personnel to work on other aircraft until replacement aircraft arrive, thus offsetting somewhat the combat damage maintenance time. This factor can be considered a constant because of the lack of information on the combat damage and replacement times. The MO factor remains the same for peace and combat operations.

(2) As mentioned above, the Marine Corps uses 120 hours for the factor, productive maintenance man-hours per man per month, in peacetime conditions. The remainder of available time on duty

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is devoted to military functions not directly related to the maintenance of aircraft, i.e., training, guard duties, administrative time, sick time, musters, leave, etc. Considering a 5-day week during peacetime conditions a maintenance man would work 6 hours a working day on aircraft maintenance. Increasing the work week by 1 day will increase the productive maintenance man-hours per man per month by 20%. In combat conditions many of the routine military functions as training, leaves, etc. would be eliminated or kept to a minimum, therefore an increase in productive maintenance man-hours per day could be realized. Considering a 12 hour day on the job during combat conditions, a reasonable figure of 8 to 10 hours could be applied to productive aircraft maintenance. By comparing the peacetime 6 hour, 5 day week (30 hours) with a combat 8 to 10 hour, 6 day week (48-60), a large increase in productive maintenance man-hours is apparent. The table below indicates the peacetime and combat aircraft utilization for some Marine Corps aircraft. OpNav Inst 05311.3B contains similar information on all aircraft.

COMBAT AIRCRAFT UTILIZATION

<u>A/C</u>	<u>M/O</u> <sup>1</sup>	<u>A/C Util (Peace)</u> <sup>1</sup>	<u>A/C Util</u> <sup>1</sup> <u>Combat</u>
A-6A	18.9	45	65
A-4C*	7.83	35	60
A-4E*	7.83	35	60
F-4B	16.40	28	58
F-8C/D	9.5	30	60

<sup>1</sup> OpNav Inst 05311.3B (latest revision)

\* A-7A rates assumed to be the same as A-4C/E

e. Aircraft Sortie Rate

(1) The average aircraft sortie rate for a sustained operation is the quotient of combat utilization over an average mission time. This average sortie rate is a planning figure for sustained operations which can change during short periods of maximum effort (2 to 4 days). The following Table indicates representative sortie rates of some aircraft.

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<u>A/C</u>	<u>Mission</u>	<u>Radius</u>	<u>Mission Time</u>	<u>A/C Util Per Month</u>	<u>Sorties Per Mo.</u>	Sorties w/ Attrition and Weather
						<u>Applied</u>
A6	Interdiction	200	2.0	65 hrs	32	30
A4	Interdiction	200	2.0	60 hrs	30	28
F4	Interdiction	200	2.0	58 hrs	29	27
A6	Close Air Support	75	1.5	65 hrs	43	40
A4*	Close Air Support	75	1.5	60 hrs	40	37
F8	Close Air Support	75	1.5	60 hrs	40	37
F4	Close Air Support	75	1.5	58 hrs	38	35
F8	Air Defense	200	2.5	60 hrs	24	22
F4	Air Defense	200	2.5	58 hrs	23	21

\* VAL (A7A) sortie rates are assumed to be the same as those for the A4 aircraft.

Note: Sorties per month per aircraft are maximums for sustained operations. Once total sorties are determined by multiplying numbers of each type aircraft times sorties per month times total operating days, a 5% reduction because of weather should be applied. Further, a .7% per sortie attrition factor should be applied in order to indicate a more accurate capability. Another limiting factor to total sortie production is the time required to replace lost aircraft. An average replacement time of one week is assumed.

f. Use of OpNav Inst 05311.3B insures that Marine Aviation combat sortie rates are standard throughout all Wings.



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.06 Relationship to Marine Corps Plans

1. Planning in the long and mid-range periods identifies the missions, tasks, and force structure of the Marine Corps of the future. Programming is oriented to identify the resources and support required to accomplish the missions and tasks set forth in planning.

2. Marine Corps planning is organized to support both the JCS planning system requirements and Navy plans as these relate to the Marine Corps. It includes three principal plans.

a. Marine Corps Capabilities Plan (MCP)

(1) Is the basic short range plan of the Marine Corps (The Current Fiscal Year).

(2) Outlines the resources provided as the result of planning, programming and budgeting decisions.

(3) Is the detailed expression of the Commandant of the Marine Corps' selection of a course(s) of action for the use and employment of those resources.

b. Marine Corps Mid-Range Objectives Plan (MMROP)

(1) It sets forth the Marine Corps Mid-Range Objectives approved by the Commandant. (The current fiscal year plus the following nine fiscal years).

(2) Is the source for inputs to the Joint Strategic Objectives Plan (JSOP) and Navy Objectives Plan (NOP).

(3) Provides guidance required in the programming function.

(4) Is the source for inputs to Department of the Navy Program Objectives if required by the Secretary of the Navy.

c. Marine Corps Long-Range Plan (MLRP)

(1) Outlines the long range objectives toward which the Marine Corps must orient all planning and programming effort. (The ten year period from the 10th year subsequent to the current fiscal year through the 19th year).

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3. The Aviation Programming Document sets forth the time phased actions that are required to attain the objectives set forth in the MMROP.

.07 Relationship to OSD Programming.

1. The level of resources authorized for Marine Aviation is set forth in the Secretary of Defense's Five Year Force Structure and Financial Program. The numbers of personnel and aircraft for the next five years is set forth in more detail in the Department of the Navy Five Year Force Structure and Financial Program (FYFS&FP).

2. The Department of Defense Programming System is the sole process by which are made the program decisions which determine the force levels, weapons systems and the support programs of the Defense Establishment. Programming is the process of establishing and maintaining a program. It is concerned with the methods of meeting military requirements in order to get the greatest benefit out of any given resource expenditure.

3. For years, program management within the Defense Department and the individual services was exercised through financial management. However, there were no means available whereby a plan or objective of a Service could be assured continuity from year to year because the annual appropriations were subject to two major influences:

a. Because of rotation of personnel, decisions made by the individuals responsible for requesting appropriations sometimes reduced the scope or changed the objectives of previous plans.

b. Enthusiasm for newer developments sometimes reduced popular and congressional support for previously planned courses of action.

4. As a measure to ease these problems, the DOD Programming System provides continuous extension of the planning horizon out to eight years in terms of force structure and five years for financial levels. Modification of approved programs are made only after careful analysis.

5. Program planning is done on a basis of broad military missions rather than on the basis of unilateral plans and priorities of individual Services. Budget and funding decisions must be compatible with long-range programming decisions.

6. The principal document of the DOD Programming System is the Secretary of Defense FYFS&FP which contains all of the approved programs for all Services. The general flow of Marine Corps planning

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originates in the Long-Range Plan, leads through the Mid-Range Objectives and is brought into more immediate focus in the Program Objectives (PO). The Program Objective contains those plans which appear to be fiscally reasonable and feasible of attainment, expressed as time-phased programs in the same FYFS&FP format and the time frame advanced one year overall. Differences between the PO and the FYFS&FP become the basis for Program Change Proposals (PCP). SecDef's approved programs are translated into appropriation structure to become the basis for a portion of the Defense budget. Those programs budgeted in the appropriation bills and enacted into law are then implemented by the Services.

7. Essential to the process of program execution is the function of appraisal. This is a continuing evaluation of approved funded programs to determine their military worth in meeting changing military requirements. It is the measurement of program progress against established milestones.

8. The Five Year Force Structure and Financial Program (FYFS&FP) is the foundation of DOD inputs to military outputs. SecDef must relate inputs (resources) to outputs (forces). He must aggregate forces to counter the evaluated threat, and concurrently allocate available resources toward meeting resource requirements necessary to provide and support those military forces.

9. The FYFS&FP separates forces into major programs and are further subdivided into program elements. The following are the program elements which include the aircraft and the majority of personnel chargeable to Marine Aviation:

<u>Major Program</u>	<u>Element No.</u>	<u>Mission</u>
Program I		
Strategic Retaliatory Forces		(General Nuclear War)
Program II		(Continental
Continental Air and Missile Defense Forces		Defense)
Program III		(Cold, Limited or
General Purpose Forces		General war)
	3 28 15 01 3	LAAM Bn's
	3 28 40 01 3	MAW's
	3 28 41 01 3	MCAS, MCAF
	3 28 45 01 3	HQ, FMF

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<u>Major Program</u>	<u>Element No.</u>	<u>Mission</u>
Program IV		(Transport of
Airlift and Sealift Forces		Combat Forces)
Program V		(Support Forces)
Reserve and Guard Forces		
	5 10 34 01 3	Fourth MAW
Program VI		(Support Forces)
Research and Development		
Program VII		(Support Forces)
General Support		
	7 06 04 01 3	Tech Trng Avn
	7 06 06 01 3	MCAS, Quantico
	7 54 60 01 3	HQMC Flt Line
	7 54 82 01 3	HMX
Program VIII		
Civil Defense		(Support Forces)
Program IX		
Military Assistance Program		(Support Forces)

10. Since major program decisions within DOD are made in terms of program elements, costing is done by program element. Costs allocated to a given program are broken down into R&D, Investment, and Operating Cost categories. Data relating to the force structure is displayed for the prior and current fiscal years, plus the following eight fiscal years (a total of ten (10) years). Resource and financial data is displayed only for the prior and current fiscal years, plus the following five (5) fiscal years (a total of seven (7) years).

11. There are four major types of resource categories:

- a. Items of equipment
- b. Military construction
- c. Manpower
- d. Operations and Maintenance appropriations.

12. Total Obligational Authority (TOA) is the total amount of funds

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available for programming in a given year, regardless of the year the funds are appropriated, obligated or expended. Resource categories are now listed in two annexes to the FYFS&FP, a Material Annex and a Construction Annex. R&D, Manpower, and Operation and Maintenance (O&MN) annexes are being developed. The Material Annex has two parts. Part I is a line-item shopping list showing the quantity and cost of all procurement line items that exceed \$2 million in one year. The shopping list covers the current year, budget year and four ensuing fiscal years. Part II, sometimes called the Weapons Dictionary, is a collection of data sheets. These contain descriptive info and data on production requirements, inventory, cost, and operations for a particular line item. The Construction Annex lists DOD approved construction projects for the current year, budget year, and four ensuing years. The sum of all program elements constitutes the total military output and the sum of all resource categories equals the total resource input to Defense programs.

13. The FYFS&FP is a continuously effective document, and the programs contained therein are always valid unless specifically modified by approved changes. All changes to the FYFS&FP, above established thresholds, must be submitted by the Service Secretaries in the form of a PCP for approval of SecDef.

14. Program Change Proposals (PCPs) are submitted when services desire to introduce new elements, make major changes to existing elements, or when any program element deviates beyond prescribed limits (thresholds). Program slippages, cost overruns, or failure to meet reliability goals, may change the character of the program to the degree that it is no longer the best on a cost-effectiveness basis, and reorientation or cancellation may be required.

15. Secretaries of the Military Departments are authorized to approve changes to the FYFS&FP below thresholds. Such changes must be within available funds for the current or preceding program year.

16. Requirements are identified and planned; plans are translated into programs; and programs are incorporated into budgets which procure the physical resources, men, equipment, and facilities needed to satisfy the requirements. The following normal sequence outlines the span of development:

\*a. Establishment of long range plan

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- \*b. Development of mid range objectives
- c. Update Program Objectives (Annually)
- d. Tentative Force Guidance (TFG) on force levels
- e. PCPs to update FYFS&FP
- f. Conversion of first program year of the FYFS&FP to the budget request
- g. Execution of programs approved and funded
- h. Program appraisal.

\*General guidance in terms of operational and weapons concepts in different time frames

Long Range Plan - appraised strategic environment 10-20 years in the future.  
Mid Range Objectives - requirements to be met in the next ten years.

17. Program Objectives (PO) provide the annual increments necessary to progress in an orderly manner toward achieving the objectives established by CMC in the Mid-Range Objectives Plan. The PO is prepared by DC/S Plans & programming, reviewed by the P&P Committee and CMC, and approved and promulgated by SecNav. It shows force levels out to eight years and financial levels for five years. The difference between the PO and FYFS&FP becomes the basis for the Marine Corps force structure input to the Joint Strategic Operations Plan (JSOP). The PO is updated semi-annually, usually November and March. Since the FYFS&FP forms the basis for DOD annual budget submission, all programs must be incorporated in this document before they can be funded. Thus differences between the PO and FYFS &FP must be submitted as PCPs. A PCP can only be forwarded to SecDef over the signature of the Secretary of the Navy.

18. The first program year of the FYFS&FP becomes the basis for the DOD budget submission. The appropriation action of Congress may not provide sufficient funds to sustain the level of action planned, or the funds may not be distributed between the appropriations to provide the proper mix of funds to accomplish the programs. Therefore, authority is provided to SecDef and Military Secretaries to make limited adjustments. However, at no time can a program exceed the authorized

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TOA assigned to a program element, or deviate from the mission assigned under the program element. The appropriation structure is entirely different from the OSD program element structure used in the FYFS&FP. It covers a three year period: (1) Prior year - this indicates how funds, previously approved by Congress, were actually utilized. Significant differences from previously approved levels are often questioned by Congressional Committee Members. (2) Current year - it reflects the latest planned use of funds approved by Congress for the year. (3) Budget year - it reflects a request to Congress for funds to support its programs. Presentation of the budget to the Congress is made by the President soon after it convenes in January of each year. Committees on Armed Services of the House and Senate conduct budget hearings at which SecDef, Sec Nav, CMC, etc., testify on the overall budget. House and Senate Committees resolve any differences and normal legislative process follows. When the appropriation bill becomes law, the President, acting through the Bureau of the Budget (BOB), apportions the amount of obligation which may be incurred during a specific period. This apportionment is concerned with controlling obligations at an orderly rate. Requests for apportionment of funds are submitted by HQMC to BOB. Further limitations or controls on funds may be imposed by SecDef and SecNav. CMC in turn further administers appropriations as allocated.

19. The following summarizes decisions from the Office of the Secretary of Defense on PO-66 items. The below listed decisions are those of primary interest to Marine Aviation in that they directly influence current plans and programs.

Subject/Issuea. EA-6B Aircraft.

Decision: The Deputy Secretary disapproved the program and directed the Navy to resubmit at a later date, with all supporting data integral to a complete system review. The Deputy Secretary subsequently approved an increase of \$5.0 million RDT&E for FY-1966.

b. Navy/Marine Corps Aircraft (EF10B).

Decision: Increase the Marine Corps 64 officers and 228 enlisted personnel for a total of 292 in support of the extension of 18 EF10B aircraft through FY 1966.

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c. Marine Helicopter Air Groups.

Decision: Approve the request for a strength increase of 1,296 personnel for FY 1966 and \$1.3 million for military construction to include 360-man barracks at MCAF Futema, 180-man barracks at MCAF Santa Ana, and 116-man barracks at MCAF New River.

d. CH-53A Helicopter.

Decision: Approve an increase of \$8.8 million in FY 1965 and \$13.3 million in FY 1966 to provide a significantly improved tactical avionics system for the CH-53A helicopter. A final increment of \$14.3 million in FY 1967 would complete this program, which is estimated to cost \$36.4 million for 104 helicopters.

e. Mission Support Aircraft.

Decision: Defer the start of the modernization of the mission support fleet until a subsequent year.

f. TC-4B Aircraft.

Decision: Approve no funds for procurement of TC-4B aircraft in FY 1966. The T-29Bs on loan from the Air Force should continue to be held by the Navy as long as the Navy has a demonstrable requirement for them.

g. Active Navy Flight Operations.

Decision: Approved \$135.0 million in FY 1965 and \$138.2 in FY 1966 which will provide for 95% of programmed hours for combat crews. Support and technical training flying were programmed at the FY 1965 and 1964 utilization rates, respectively.

h. Marine Tactical Data System.

Decision: Approved \$24.0 million in FY 1965 to procure four Tactical Air Control Centers, AN/TYQ-1s, three additional Tactical Data Communications Centrals, (AN/TY( ) and related module spares and spare parts. Did not approve production funding in FY 1966 for the procurement of additional MTDS components. A service reclama requesting an additional \$6.7 million for FY 1965 was denied.

i. Radar Set AN/TPS-32 (MTDS).

Decision: Approved \$5.0 million in FY 1966 for redesign,



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development and continued engineering effort for Radar Set AN/TPS-32. This set is being developed as a long range, high data rate height finding radar to provide data to the MTDS.

j. Military Personnel Strengths, Marine Corps, FY 1965 and 1966.

Decision: Approved the following personnel strengths:

	<u>FY 1965</u>		<u>FY 1966</u>	
	<u>Begin</u>	<u>End</u>	<u>Begin</u>	<u>End</u>
Officer	16, 819	17, 349	17, 349	17, 650
Enl	172, 565	172, 518	172, 518	175, 372
Cadets	<u>367</u>	<u>202</u>	<u>202</u>	<u>168</u>
TOTAL	189, 751	190, 069	190, 069	193, 190

Of the above authorized increases in end year strengths, Marine Corps Aviation elements were granted the following increases:

LAAMS	318
Helicopter Air Groups	1, 296
EF-10B Extension	<u>292</u>
	1, 906

Format B Decisions

k. Advanced Jet Trainer Aircraft (TA-4E).

Decision: Approved the procurement of 152 TA-4E aircraft of which 48 are programmed for VMTs and 11 for HEDRONS. Manpower increases to support this program in the VMTs were approved as follows:

	<u>FY 67</u>	<u>FY 68</u>	<u>FY 69</u>
USMC	169	178	178

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1. Navy/Marine Corps Aircraft (Area PCP).

Decision: A-7A - Approved \$2.3 million for R&D in FY 1966. Any future VAX proposal will involve the A7A. Approved a support pipeline factor of 15%. FY 1966-67 aircraft procurement quantities have been reduced to remain within the appropriate level of previously approved aircraft investment cost.

F-4B - Approval of the CVA Midway and Roosevelt modernization will permit a reduction of two squadrons from the previously approved Navy F-4 force structure. Therefore, F-4 procurement was reduced by 42 aircraft in FY 1966 and 12 aircraft in FY 1967.

CH-46A - Disapproved costs for any systems associated with IHAS. Approved the changeover to the T58-GE-10 engine, but its costs should be compensated by reductions in the procurement of medium transport helicopters. This decision may require the retention of some UH-34Ds in MAWs in order to meet approved force structures. Additional procurement of 36 helicopters in FY 1969 was authorized.

CH-53A - Disapproved both the IHAS and/or BAINS navigation systems for this helicopter. In order to offset the T-64 engine cost increase of \$9.9 million, a reduction of seven aircraft in the previously approved program was authorized.

\*KC-130 - Recommended the establishment of a Single Manager Tanker Force, utilizing KC-135s in support of inter-theatre deployment of Marine tactical aviation units and associated training. Indicated that the addition of A-6As and A-7As, with their increased endurance, should reduce tanker requirements.

m. Mission Support Aircraft.

Decision: Disapproved all new mission support aircraft procurement in FY 1966 and all new mission support procurement now in the FYFS&FP. Established force levels below the proposed levels.

A new study and program will be developed during the coming year as a basis for FY 1967 budgeting.

\* SecDef Memo to SecNav of 28 December 1964 stated that the C-130s, currently assigned to MATS, were originally procured for TAC, and that as these C-130As and Bs are replaced by C-141s, the C-130s will

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be transferred to the Air National Guard. The Memo further stated that in the event airlift requirements of the Navy/Marine Corps cannot be satisfied by MATS, and must be met by modernization of Navy transport aircraft, a PCP to substantiate this decision should be submitted.

20. The following are the major PO-67 items effecting Marine Aviation which are being requested during this Programming cycle.

- a. VF/VA Air Group - To obtain necessary personnel to man one H&MS and one MABS of a VF/VA Marine Aircraft Group that is scheduled to be deactivated beginning in FY 1967.
- b. EA6B - To obtain EA6B aircraft to replace the remaining 18 operating EF10Bs beginning in FY 1968.
- c. VMFT/VMAT - To reorganize and outfit the two existing VMTs, now programmed for 24 TA4E each, with the same type of tactical aircraft that are in Wing squadrons. The Cherry Point VMT would be assigned an additional mission in FY 68 of Phase I attack air crew training and its aircraft allowance be changed to ten TA6A and 15 TA4E. The El Toro VMT would be assigned an additional mission of Phase I fighter crew training in FY 68 and be equipped with 15 F4B and nine TA4E.
- d. OV-10A - To obtain approval for the introduction of 54 OV-10A into the three existing VMO squadrons (18 each). Upon introduction of the OV-10A, the UH-1E operating level will be reduced from 24 to 12 per squadron.
- e. A6A - To increase the operating level of Marine All-Weather attack squadrons from 12 to 15 A6A aircraft each in FY 69.
- f. SNMMMS - To provide the personnel in the Marine Air Wings for a uniform maintenance and material management system and a management information reporting system in FY 67.
- g. Support Aircraft - To provide replacements for obsolescent aircraft now in the Marine Aircraft Wings, MCAS and MCAFs, Headquarters FMF, MCAS Quantico and the Headquarters Flight Line at Andrews. Replacement aircraft procurement has been denied for the previous five years for support aircraft.
- h. MCAS/MCAF Personnel - To provide the Marine Corps Air

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Stations and Facilities with the personnel to sustain operations, training and logistic support in event of deployment of the tenant combat forces in support of contingency operations or combat, and will provide a minimum base from which mobilization plans can be executed.

i. KC-130F - To increase the operating allowance of each of the three VMGR squadrons from 12 to 18 KC-130Fs beginning in FY 68.

j. OV-10A and UH-1E For the 4th MAW - To provide the 4th MAW with 18 OV-10A and 12 UH-1E aircraft for its VMO squadron.

k. E2A - To obtain one 9-plane E2A squadron in each of the three Marine Aircraft Wings by FY 1971 to provide airborne early warning for the anti-air warfare mission required during MEF operations.

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PART IICHAPTER IAVIATION TROOP AND ORGANIZATION100. General Objectives

1. To maintain a Fleet Marine Force aviation structure which will provide tactical aviation forces capable of performing the following basic aviation in support of Fleet Marine Force operations:

Offensive Air Support  
Anti-Air Warfare  
Assault Support  
Aerial Reconnaissance  
Control of Aircraft and Missiles

2. To maintain a Marine Aircraft Wing structure which is inherently capable of commanding and controlling all functional type aircraft, missile and service units necessary for the tactical air operations.

3. To modify the structure of the MAW to reflect the introduction of new aircraft and weapons systems. Organizational and structure changes evolved as a result of test and evaluation by the Naval Air Test Center, Navy Operational Development Squadrons, MCLFDC and Field Commands will be incorporated as approved.

4. To expand Fleet Marine Force aviation to a four Marine Aircraft Wing structure during mobilization.

a. Augmentation of existing active aviation forces and formation of the 4th Marine Aircraft Wing will come from the Marine Air Reserve Training Command (MARTCOM).

b. The activation of Fleet Marine Force aviation units, detailed mobilization, and wartime objectives are contained in the Marine Corps capabilities plan (MCP-FY).

101. Organizational Concepts

1. To maintain not less than three Marine Aircraft Wings as prescribed by law.

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2. To maintain a balanced Marine Aircraft Wing structure capable of performing the five basic aviation functions in support of Fleet Marine Force operations. Its structure will be based on the Marine Corps doctrine of amphibious operation as set forth in approved plans and documents; the enemy threat as indicated in appropriate intelligence reports and estimates; and the current and predicted availability of aircraft and weapons systems.
3. To organize VF/VA Air Groups as composite Air Groups of both fighter and attack aircraft so their peacetime structure and training is as nearly similar to their wartime posture as possible.
4. To maintain adequate aviation support and training activities and installations required for support of the Marine Aircraft Wings.
5. To maintain a Marine Air Reserve organization responsive to the mobilization requirements of the Marine Corps.
6. Typical Marine Aircraft Wings for FY 1965, FY 1970 and FY 1975 are shown in Appendix 1.
7. Unit Deployment and Rotation Schedule to WESTPAC is shown in Appendix 2.
8. Fleet Marine Force aviation structure changes are shown in Appendix 3.

102. Missions and Tasks1. Active Organizations and Units

a. Missions and tasks of active organizations and units are contained in Marine Corps Order 5440.3 of 4 May 1964. As the Tables of Organization (T/O's) are revised, they will be the source for missions and tasks of active organizations and units.

2. Programmed Organizations and Units

- a. Marine Airborne Early Warning Squadron (VMW) (When Activated)

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(1) Mission

Provide early warning approach of enemy aircraft and act as airborne fighter. interceptor control.

(2) Tasks

(a) Provide distant airborne early warning to Fleet Marine Force units.

(b) Maintain the capability to function as an airborne fighter director within limits of assigned aircraft.

(c) Maintain the capability to relay AEW video.

(d) Provide radar navigation and weather information as required.

(e) Maintain capability to conduct electronic search operations for surface targets, and to direct strike aircraft in attacks thereon.

(f) Conduct passive ECM flights in areas of tactical interest.

(g) Maintain the capability of operating from aircraft carriers, advanced bases, and SATS.

(h) Be prepared to deploy detachments aboard aircraft carriers, advanced bases and SATS.

(i) Perform organizational maintenance on assigned aircraft.

b. Marine Fighter Training Squadron (VMFT) (When Activated)(1) Mission

To provide pilot and air crew training in fighter type aircraft in support of the Fleet Marine Forces.

(2) Tasks

(a) Provide advanced training for selected pilots and air crews in fighter doctrine, tactics and techniques.

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(b) Conduct transitional and refresher training for selected pilots and air crews in fighter doctrine, tactics and techniques.

(c) Be prepared to execute applicable portions of current mobilization plans on command.

(d) Perform organizational maintenance on assigned aircraft and intermediate maintenance on peculiar avionics equipment.

c. Marine Attack Training Squadron (VMAT) (When Activated)

(1) Mission

To provide pilot and air crew training in attack type aircraft in support of the Fleet Marine Forces.

(2) Tasks

(a) Provide advanced training for pilots and air crews in attack doctrine, tactics and techniques.

(b) Conduct transitional and refresher training for selected pilots and air crews in attack doctrine, tactics and techniques.

(c) Be prepared to execute applicable portions of current mobilization plans on command.

(d) Perform organizational maintenance on assigned aircraft and intermediate maintenance on peculiar avionics equipment.

3. Mobilization Organizations and Units

a. Marine Training and Replacement Command

(1) Mission

Provide pilot, air crew, and aviation specialist training and administer training and replacement pools in support of Fleet Marine Forces.

(2) Tasks

(a) Prepare plans for the orderly expansion of training units in accordance with current mobilization plans.



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(b) Establish and maintain in coordination with appropriate Fleet Commanders, current syllabi and training standards for each training course.

(c) Coordinate training rates with appropriate commands and be prepared to establish and administer training and replacement pools in support of the Fleet Marine Forces.

b. Marine Air Support Training Squadron (MASS(T))

(1) Mission

Provide training of personnel in the control of aircraft operating in close or direct support of Fleet Marine Force operations.

(2) Tasks

(a) Provide training of personnel to operate the Direct Air Support Center.

(b) Provide training of personnel in the operation and maintenance of facilities for electronic control of close and direct air support operations.

(c) Provide training of personnel in the operation of the helicopter direction center.

(d) Provide fourth echelon maintenance of Marine Corps furnished radar equipment and aviation peculiar communication-electronics material items and perform third echelon maintenance of other communication-electronic items, less Single Side Band.

(e) Provide second echelon maintenance for organic motor transport equipment.

c. Marine Air Control Training Squadron (MACS (T))

(1) Mission

Provide training of personnel in air surveillance and control of aircraft and surface-to-air missiles for anti-air warfare in support of the Fleet Marine Forces.

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(2) Tasks

(a) Train personnel to install and operate electronics and communications equipment required for detection, identification and control of aircraft and surface-to-air missiles.

(b) Train personnel to perform air intercepts by directing fighter aircraft.

(c) Train personnel to provide navigational assistance for friendly aircraft.

(d) Train personnel to operate as an alternate Tactical Air Control Center.

(e) Provide fourth echelon maintenance of organic Marine Corps furnished radar equipment, aviation peculiar communication-electronics material items and be capable of performing third echelon maintenance of all other communication-electronics items.

(f) Provide second echelon maintenance for organic motor transport equipment.

d. Marine Combat Readiness Aircraft Group (MCRAAG)(1) Mission

Provide pilot, air crew and aviation specialist training in support of Fleet Marine Forces.

(2) Tasks

(a) Conduct pilot, air crew and aviation specialist training as required by the Fleet Marine Forces.

(b) Plan and provide for the logistic and aircraft maintenance support of attached squadrons.

(c) Maintain and operate assigned training devices.

(d) Conduct such other training, including instruction in the field of atomic weapons, as may be directed by higher authority.

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(e) Conduct Phase I pilot and air crew training.

e. Marine Helicopter Training Squadron (HMMT) (When Activated)

(1) Mission

To provide pilot training in helicopters in support of the Fleet Marine Forces.

(2) Tasks

(a) Provide operational helicopter training for selected pilots.

(b) Conduct transitional and refresher training for selected pilots in helicopter tactics and techniques.

(c) Be prepared to execute applicable portions of current mobilization plans on command.

(d) Perform organizational maintenance on assigned aircraft.

f. Marine Instrument Training Squadron (VMIT) (When Activated)

(1) Mission

To provide jet instrument training in support of the Fleet Marine Forces.

(2) Tasks

(a) Provide jet instrument flight training to selected pilots.

(b) Be prepared to execute applicable portions of current mobilization plans on command.

(c) Perform organizational maintenance on assigned aircraft and intermediate maintenance on peculiar avionics equipment.

g. Marine Composite Reconnaissance Training Squadron (VMCJ(T))

(1) Mission

To provide pilot and air crew training in aerial photographic

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reconnaissance, airborne active and passive electronics and communications countermeasures and airborne electronic reconnaissance in support of Fleet Marine Forces.

(2) Tasks

(a) Provide advanced training for pilots and air crews in jet reconnaissance tactics and techniques.

(b) Conduct transitional and refresher training for selected pilots and air crews in jet reconnaissance doctrine, tactics and techniques.

(c) Perform organizational maintenance on assigned aircraft and intermediate maintenance on photographic and peculiar avionics equipment.

103. Specific Objectives1. Offensive Air Support

a. To provide a continuous all-weather offensive air support capability to the MAW.

(1) The number of attack squadrons will remain at 12 throughout the period.

(2) Six of the attack squadrons will be equipped with the A6A, an all-weather attack aircraft, by the end of FY 1968. The other six attack squadrons will operate the A4 series, a visual attack aircraft until they are replaced with the A7A, an improved visual attack aircraft, beginning FY 1968. The visual attack squadrons can provide night and all-weather air support through the use of the Air Support Radar Teams of the MASS.

(3) All attack squadrons will be capable of delivering conventional or atomic and BW/CW agents.

b. To maintain within the Marine Air Support Squadron (MASS) a Direct Air Support Center (DASC) to provide the Wing with the air control capability necessary for all direct support within assigned zone of responsibility.

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c. To provide tactical electronic warfare in support of air-ground operations. This will continue to be provided by the VMCJ's.

d. This offensive air capability will also be employed in the anti-air warfare role for the destruction of airfield, missile and radar sites.

e. To provide protection to assault helicopters against ground fire by neutralization of helicopter lanes and landing zones.

## 2. Anti-Air Warfare

a. To insure an acceptable degree of air superiority within the Landing Force objective area by intercepting and destroying enemy aircraft and missiles under all-weather conditions; by the destruction of enemy airfield, missile and radar sites; and by protection of vertical assault forces.

(1) The number of fighter squadrons in the three MAW's will remain at 15 throughout the period.

(2) The number of aircraft in the fighter squadrons will remain at 15.

(3) All fighter squadrons will be equipped with the F4B or F4J by the end of FY 1968. Upon receipt of the F4 aircraft, the squadrons are being redesignated as Fighter/Attack Squadrons and will be used in offensive air support roles as a secondary mission when needed.

b. To provide an airborne early warning capability in each MAW, three VMW squadrons will be established.

(1) The first VMW squadron will be activated at MCAS, El Toro in FY 1969 and will be equipped with nine E2A aircraft. The second and third squadrons will be formed in FY 1970 and 1971. (Procurement of the E2A aircraft has not been approved as yet.)

c. To provide a surface-to-air missile capability in each MAW for close-in air defense of critical installations and units within the amphibious objective area.

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d. To maintain within each MAW, three Marine Air Control Squadrons (MACS) to provide air warning and control of aircraft and missiles assigned to the anti-air warfare role and the control of all friendly air operations within assigned area of responsibility.

### 3. Assault Support

a. To achieve the capability to transport the assault elements of two RLT's (four BLT's), in each FMF, a distance of 50 miles radius within 60-90 minutes. This capability will be realized in FY 1970 at which time we will have our 15 medium helicopter squadrons equipped with CH-46A's and our three heavy helicopter squadrons equipped with CH-53A's.

b. To maintain the capability to provide aerial refueling to tactical aircraft on operational missions and flight ferry of aircraft squadrons to any theater of operations.

c. To maintain the capability to provide intra-theater assault airlift for troops, supplies and equipment, including air drop of supplies and equipment.

### 4. Aerial Reconnaissance

a. To provide all-weather aerial multi-sensor imagery, electronic and visual reconnaissance/surveillance to the MAW.

(1) Photographic reconnaissance is now provided by the RF8A aircraft of the three VMCJ squadrons. The RF8A will be phased out by the RF4B starting in FY 1965. The RF4B will provide multi-sensor imagery for the Wing.

(2) Electronic Countermeasures/Reconnaissance is now provided by the EF10B aircraft of the VMCJ's. One squadron of EF10B's will be phased out by EA6As starting in FY 1965. The remaining 18 EF10B aircraft will be extended until additional EA6 aircraft can be obtained to outfit the other two VMCJ squadrons.

(3) Visual aerial reconnaissance is now provided by the UH1E/OH43D/01B/C aircraft of the three VMO squadrons. The OH43 and the 01 aircraft will all be phased out by the UH1E during FY 1966.

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Attack squadrons will provide deep visual reconnaissance as a secondary role. (The OV-10A is programmed for the VMO squadrons beginning in FY 1968 along with the UH-1Es.)

(4) Information received from the reconnaissance systems of the EA6 and the RF-4B will be fed into a Ground Data Readout and a tactical air-ground information processing and interruption system which will facilitate the processing and evaluation of that information.

(5) A6A-equipped all-weather attack squadrons will be able to provide some all-weather reconnaissance of moving targets while operating in their offensive air support role.

5. Control of Aircraft and Missiles.

a. To continue to provide the MAW the air control facilities necessary to control all aircraft and missiles in their assigned roles listed in paragraphs 1. through 4. above. This will be accomplished through the radars and control facilities contained in MWHG, MACS, MASS, MATCU, LAAM Bn and VMW squadrons. The new generation of equipment will greatly improve the quality of control of aircraft and missiles. Introduction of new radars and equipment for these units are listed in Chapter V.

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Paragraph 104 - Reserve Requirements1. General

a. The Marine Air Reserve consists of two principal elements; the Organized Reserve and the Volunteer Reserve. These two elements must provide trained units and individuals required to support the expansion of the Marine Corps during the first six months of mobilization for war or national emergency to a 4th Division Wing Team plus its supporting units. To this end, the total Reserve Program will continue to place emphasis on paralleling the Regular Establishment in the areas of policies, organization, training and techniques.

2. Objectives

a. The mobilization objective for Marine Aviation is the achievement of a four Wing Fleet Marine Force together with supporting elements capable of deployment by M / 30 days. The specific objectives for the Marine Air Reserve are:

(1) To augment the M-Day Fleet Marine Forces bringing each M-Day unit to full strength.

(2) To activate the 4th Marine Aircraft Wing.

(3) Provide replacement pilots, aircrews and support personnel to deployed units.

(4) To augment other operating forces, as required.

3. Force Structure

a. Ideally, the tactical squadrons of the 4th Marine Aircraft Wing should be in being in the OMCR; organized, equipped and trained like their counterparts in the active forces. However, pilot and technical skills available in the vicinity of many Marine Air Reserve Detachments are insufficient to form full strength squadrons. As a result, some instances will arise where two or more like reserve units will have to be combined to form one full strength squadron for the 4th MAW.

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b. The force structure for the 4th MAW is shown in Chapter V.

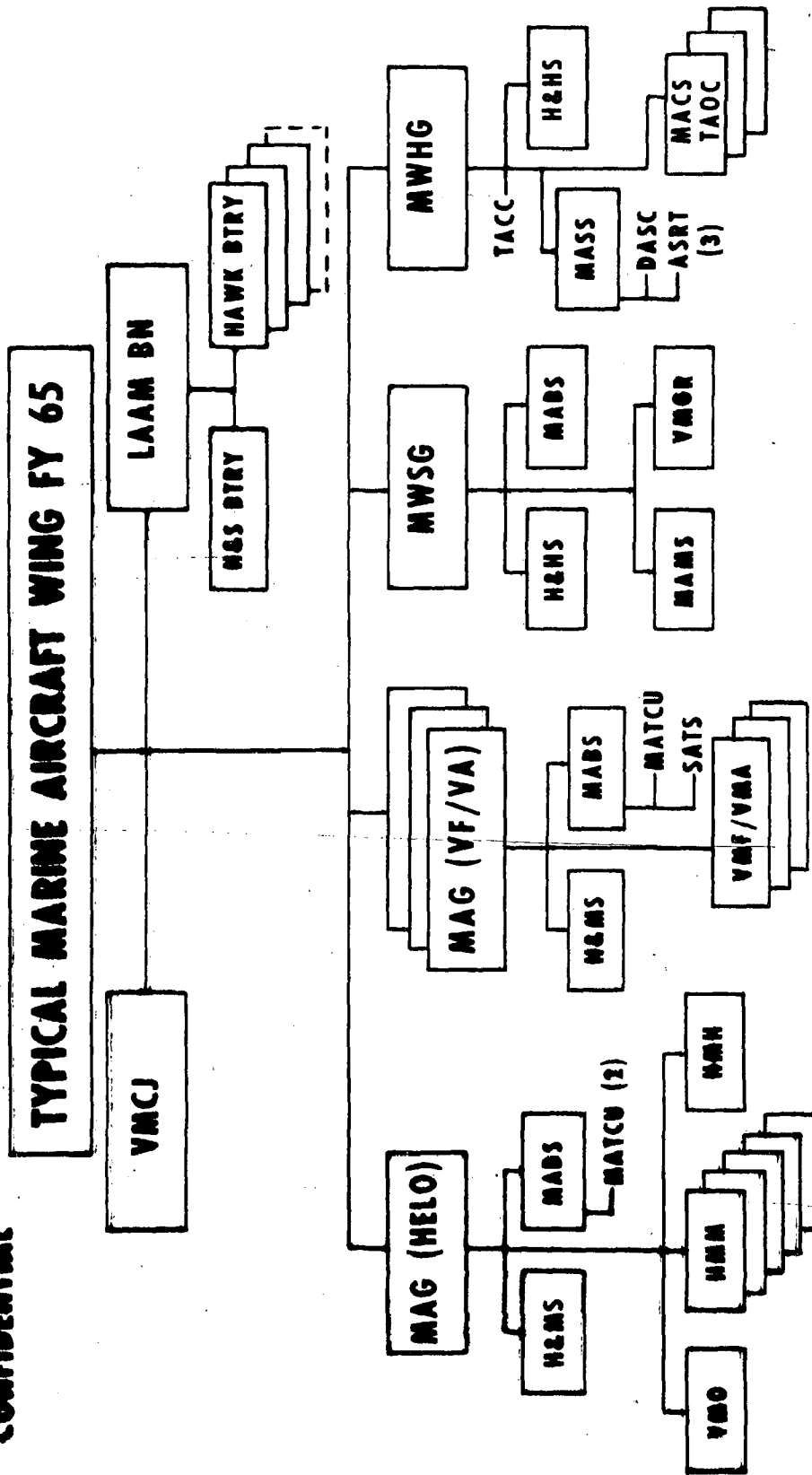
4. Mobilization Phasing

a. Mobilization of the 4th Marine Aircraft Wing will commence at M / 10 days concurrent with the 4th Marine Division, with emphasis upon accelerated training. CNARESTRA will assign aircraft and associated support equipment for the 4th MAW to the Commanding General, Marine Air Reserve Training Command (CG MARTC) so as to enable the 4th MAW to fulfill its M / 30 day deployment commitment.

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**18 LAUNCHERS**

108 HAWK MISSILES

**12 TURBO PROP**

12 REFUELER/TRANSPORT

22 SUPPORT AIRCRAFT

**165 JETS**

75 FIGHTER/ATTACK  
 60 ATTACK (VISUAL)  
 12 ATTACK (ALL WEATHER)  
 9 ELECTRONIC WARFARE  
 9 PHOTO

**156 HELICOPTERS**

24 LIGHT OBSERVATION  
 120 MEDIUM TRANSPORT  
 12 HEAVY TRANSPORT

Appendix (1) to  
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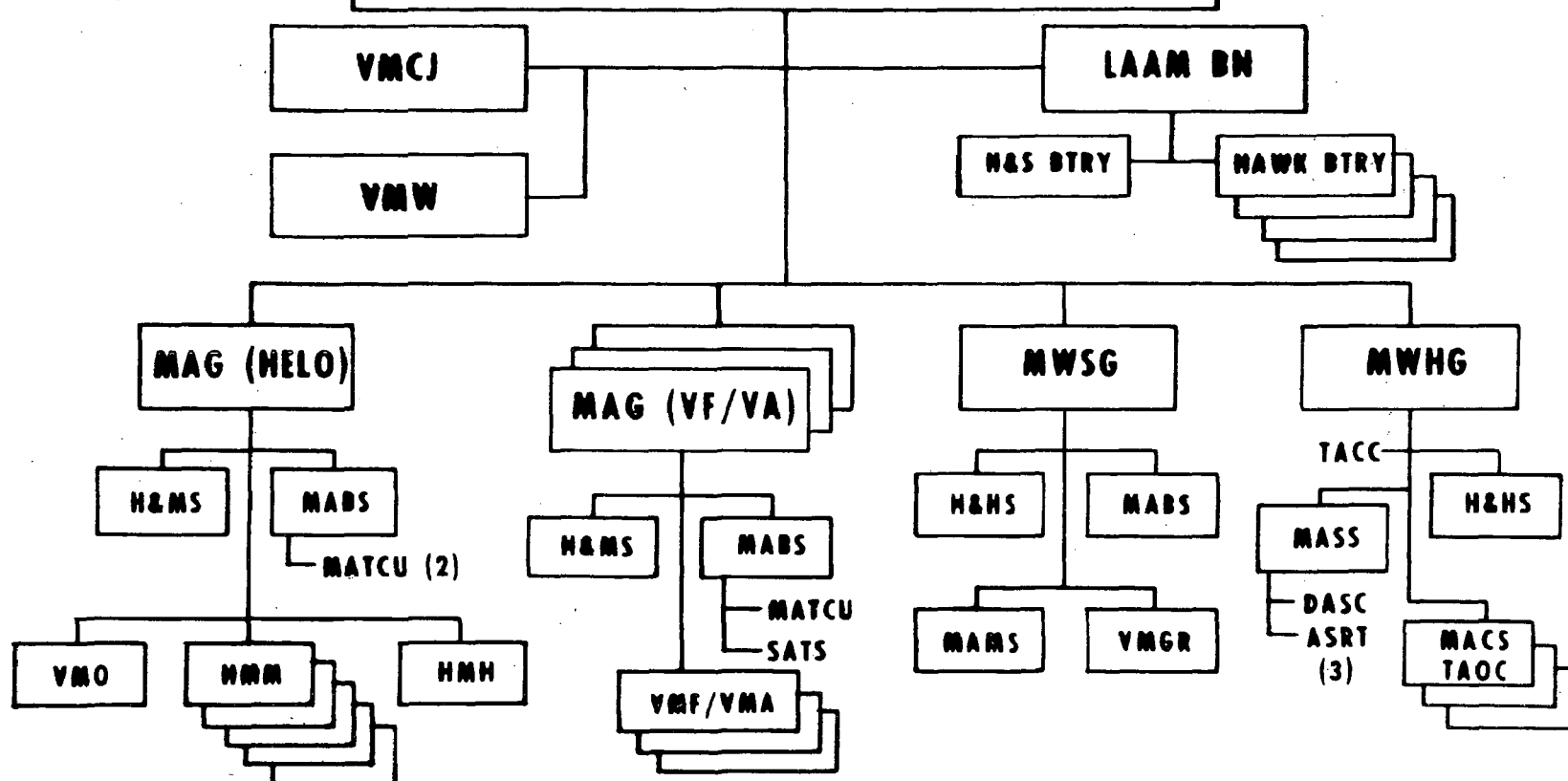
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## TYPICAL MARINE AIRCRAFT WING FY 70



### 156 HELICOPTERS

12 LIGHT OBSERVATION  
120 MEDIUM TRANSPORT  
24 HEAVY TRANSPORT

### 163 JETS

75 FIGHTER/ATTACK  
40 ATTACK (VISUAL)  
30 ATTACK (ALL WEATHER)  
9 ELECTRONIC WARFARE  
9 PHOTO

### 45 TURBO PROP

18 REFUELER/TRANSPORT  
9 EARLY WARNING  
18 OBSERVATION

### 24 LAUNCHERS

144 HAWK MISSILES  
22 SUPPORT AIRCRAFT

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DECLASSIFIED

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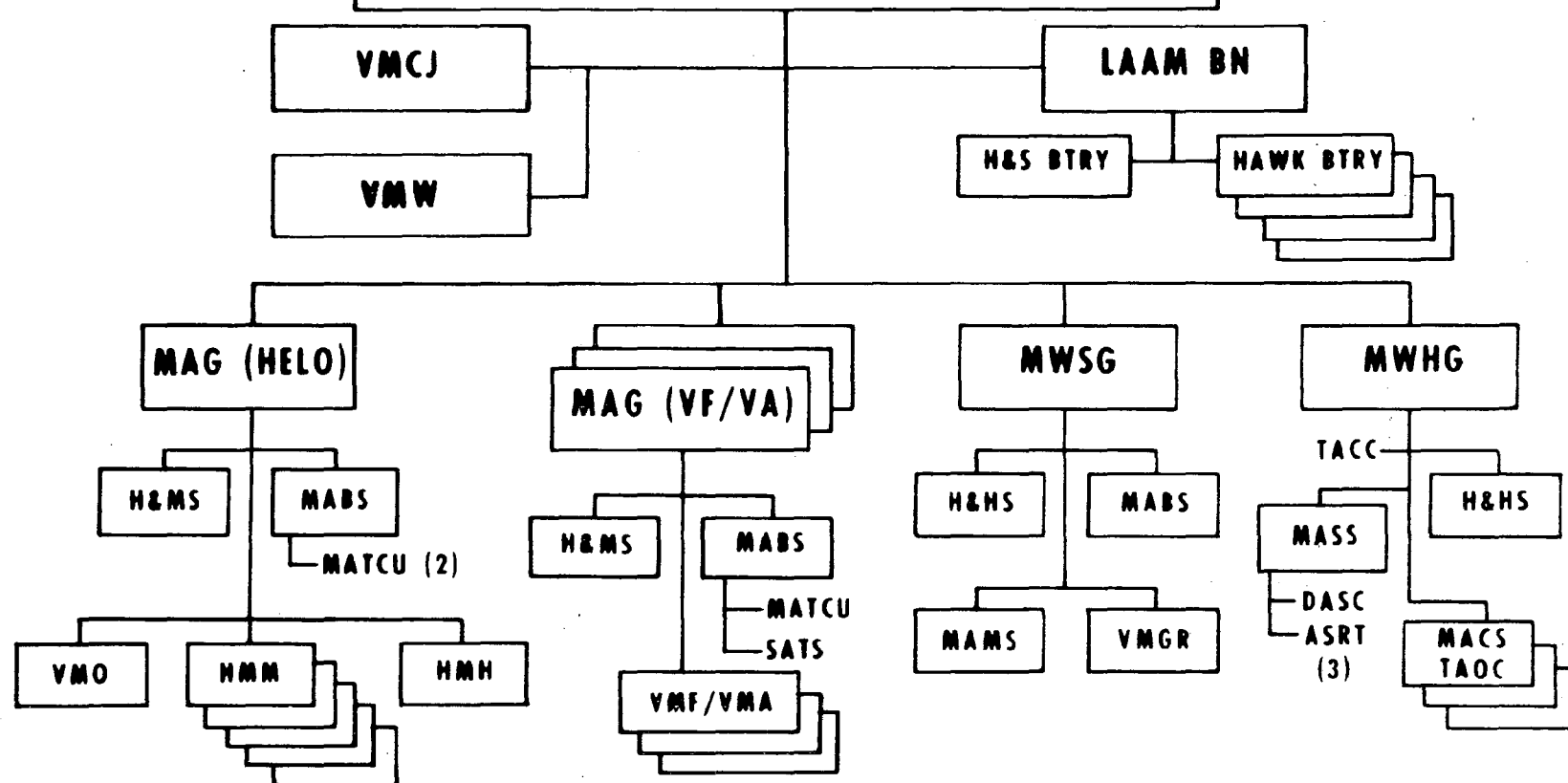
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## TYPICAL MARINE AIRCRAFT WING FY 75



### 156 HELICOPTERS

12 LIGHT OBSERVATION  
120 MEDIUM TRANSPORT  
24 HEAVY TRANSPORT

### 163 JETS

75 FIGHTER/ATTACK  
40 ATTACK (VISUAL)  
30 ATTACK (ALL WEATHER)  
9 ELECTRONIC WARFARE  
9 PHOTO

### 45 TURBO PROP

18 REFUELER/TRANSPORT  
9 EARLY WARNING  
18 OBSERVATION

### 24 LAUNCHERS

144 HAWK MISSILES  
22 SUPPORT AIRCRAFT

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Appendix (1) to  
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UNIT DEPLOYMENT AND ROTATION SCHEDULE-WESTPAC  
FY 1965-1975

1. Objectives:

- a. Maintain the First MAW at a high state of combat readiness.
- b. Eliminate non-availability of personnel in pipelines normally associated with replacement programs.
- c. Provide maximum stability of personnel within deployed units.
- d. Foster the highest degree of unit esprit within deployed squadrons.

2. Policy:

- a. Deployment and rotation of squadrons to and from WestPac as units will continue.
- b. Normally only squadrons having completed Phase II of their unit training will be deployed.
- c. Personnel of a squadron scheduled for deployment will be frozen one year prior to departure and will remain with the squadron until completion of its deployment.
- d. All aircraft squadrons plus MACS, MARTSAT, HAWK Batteries and MASS will be unit rotated except the VMGR Squadrons. The personnel of VMO and MASS squadrons will be replaced on a semi-annual Cadre basis. All other WestPac units will be replaced on an individual basis.

3. The proposed Western Pacific Marine Corps Aviation Unit Deployment and Rotation Schedule FY 1965-1975 is contained on page 2 of Appendix 2. Squadrons have been designated by functional type and date due on station but not by individual squadron numbers. The specific squadrons rotated will be based upon recommendations made by the respective Fleet Marine Force Commanders.

4. The actual deployment and rotation schedule will be the subject of separate correspondence to FMFPAC and FMFLANT annually as heretofore.

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STRUCTURE CHARTSFY 1965Approved Structure Changes

- a. VMCJ-2 in FMFLant at MCAS Cherry Point begins converting from RF8A/EF10B to RF8A/EA6A during fourth quarter.
- b. VMA-121 in FMFPac at MCAS El Toro begins converting from A4C to A4E during fourth quarter.
- c. VMO-2 in FMFPac at MCAF Futema begins converting from OH43D/01B to UH1E during fourth quarter.
- d. Activate MATCU-70 in FMFPac at MCAS El Toro during fourth quarter.
- e. MACS-3 in FMFPac at MCAF Santa Ana receives AN/TYQ-2 during fourth quarter.

FY 1966Approved Structure Changes

- a. Increase the number of personnel in each Helo H&MS and MABS to support approved force structure.
- b. VMFA-122 in FMFPac at MCAS El Toro converts from F8E to F4B during first quarter.
- c. Establish HMM-165 in FMFPac at MCAF Santa Ana with CH46A during first quarter.
- d. VMA(AW)-533 in FMFLant at MCAS Cherry Point converts from A4C to A6A during first quarter.
- e. Activate D Battery 1st LAAM Battalion in FMFPac at 29 Palms during first quarter.
- f. Activate D Battery 2d LAAM Battalion in FMFPac at 29 Palms during first quarter.
- g. Activate D Battery 3d LAAM Battalion in FMFLant at MCAS Cherry Point during second quarter.

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- h. VMCJ-3 in FMFPac at MCAS El Toro begins converting from RF8A/EF10B to RF4B/EF10B during first quarter.
- i. HMM-264 in FMFLant at MCAF New River begins converting from UH34D to CH46A during second quarter.
- j. VMA (AW)-225 in FMFLant at MCAS Cherry Point begins converting from A4C to A6A during second quarter.
- k. Establish HMH-463 in FMFPac at MCAF Santa Ana with CH53A during third quarter.
- l. VMFA-333 in FMFLant at MCAS Beaufort begins converting from F8C to F4B during third quarter.
- m. VMFA-334 in FMFPac at MCAS El Toro begins converting from F8C to F4B during third quarter.
- n. Activate MATCU-74 in FMFLant at MCAS Cherry Point during fourth quarter.
- o. Activate MATCU-75 in FMFPac at MCAS El Toro during fourth quarter.
- p. Activate MATCU-77 in FMFPac at MCAF Santa Ana during fourth quarter.
- q. Activate MATCU-78 in FMFLant at MCAF New River during fourth quarter.
- r. MACS-8 in FMFLant at MCAF Cherry Point receives AN/TYQ-2 during fourth quarter.
- s. VMCJ-2 in FMFLant at MCAS Cherry Point begins converting from RF8A/EA6A to RF4B/EA6A during fourth quarter.
- t. VMT-1 and VMT-2 begin converting from TF9J to TA4E during fourth quarter.

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FY 1967Approved Structure Changes.

- a. MACS-9 in FMFLant at MCAS Beaufort receives AN/TYQ-2 during first quarter.
- b. MACS-7 in FMFLant at MCAF New River receives AN/TYQ-2 during third quarter.
- c. MACS-5 in FMFLant at MCAS Cherry Point receives AN/TYQ-2 during fourth quarter.
- d. VMCJ-1 in FMFPac at MCAS Iwakuni converts from RF8A/EF10B to RF4B/EF10B during second quarter.
- e. Two VMA squadrons convert from A4C to A6A aircraft.
- f. Three VMF(AW) squadrons convert from F8D aircraft to F4B/J aircraft.
- g. Three HMM squadrons convert from UH34D to CH46A aircraft.
- h. HMH-461 in FMFLant at MCAF New River begins converting from CH37A to CH53A during second quarter.
- i. HMH-462 in FMFPac at MCAF Santa Ana begins converting from CH37A to CH53A during third quarter.
- j. Deactivate one H&MS and one MABS, MAG VF/VA during fourth quarter.

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Program Objective Structure Changes.

- a. Retain one VF/VA H&MS and MABS scheduled for deactivation.

FY 1968Approved Structure Changes.

- a. MACS-4 in FMFLant at MCAS, Beaufort receives AN/TYQ-2 during second quarter.
- b. MACS-6 in FMFPac at MCAF Santa Ana receives AN/TYQ-2 during third quarter.
- c. MACS-2 in FMFPac at MCAS Kaneohe Bay receives AN/TYQ-2 during fourth quarter.
- d. Two VMF(AW) squadrons convert from F8E to F4B/J.
- e. One VMA squadron converts from A4E to A6A.
- f. Two VMA squadrons convert from A4E to A7A.
- g. Three HMM squadrons convert from UH34D to CH46A.

Program Objective Structure Changes.

- a. VMO-6 in FMFPac at MCALF, Pendleton begins converting from UH1E to OV10A/UH1E during third quarter.
- b. VMO-1 in FMFLant at MCAF, New River begins converting from UH1E to OV10A/UH1E during third quarter.
- c. VMCJ-3 in FMFPac at MCAS, El Toro begins converting from RF4B/EF10B to RF4B/EA6B during third quarter.
- d. Begin increasing all VMGR squadrons from 12 to 18 KC130 aircraft.

FY 1969Approved Structure Changes.

- a. MWHG-1 in FMFPac at MCAS Iwakuni receives AN/TYQ-1 and AN/TYQ-3 during first quarter.

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- b. MACS-2 in FMFPac at MCAS, Kaneohe Bay receives AN/TYQ-2 during first quarter.
- c. One VMA converts from A4E to A7A.
- d. MWHG-2 in FMFLant at MCAS, Cherry Point receives AN/TYQ-1 and AN/TYQ-3 during second quarter.
- e. Three HMM convert from UH34D to CH46A.
- f. MWHG-3 in FMFPac at MCAS, El Toro receives AN/TYQ-1 and AN/TYQ-3 during third quarter.
- g. All MACS receive AN/TPS-32 during fourth quarter.

Program Objective Structure Changes.

- a. Increase all VMA(AW) squadrons from 12 to 15 A6As.
- b. VMCJ-1 in FMFPac at MCAS, Iwakuni converts from RF4B/EF10B to RF4B/EA6B during second quarter.
- c. VMO-2 in FMFPac at MCAF, Futema begins converting from UH1E to OV10A/UH1E during second quarter.
- d. VMO-4 in 4th MAW begins converting from UH-1E to OV10/UH1E.

FY 1970Approved Structure Changes.

- a. One HMM converts from UH34D to CH46A.
- b. One VMA converts from A4E to A7A.

Program Objective Structure Changes.

- a. Establish VMW-3 in FMFPAC at MCAS, El Toro with E2A.

FY 1971Program Objective Structure Changes.

- a. One VMA converts from A4E to A7A.

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b. Establish VMW-2 in FMFLANT at MCAS, Cherry Point with E2A.

c. One HMM converts from UH34D to CH46A.

FY 1972

Program Objective Structure Change.

a. One VMA converts from A4E to A7A.

b. Establish VMW-3 in FMFPAC at MCAS, Iwakuni with E2A.

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CHAPTER IIAVIATION RESEARCH AND DEVELOPMENT200. General

1. Objectives: The Aviation Research, Development, Test and Evaluation program must provide for the timely development of significantly improved aircraft and related systems and equipment required for the Fleet Marine Forces Aviation components. Development emphasis must be given to the potential maximum utilization of new and replacement systems to include:

a. Operation in all conditions of weather and visibility, day or night under amphibious conditions in an ECM environment.

b. Maximum mobility and helicopter transportable whenever possible and appropriate.

c. A high degree of reliability with minimum maintenance required in terms of time, personnel numbers and skill levels.

d. Lowest possible costs for development and procurement.

2. Development Areas: Development of Aviation weapons systems will be accomplished in the following operational categories:

a. Combat Air Support

b. Anti-Air Warfare

c. Intelligence

d. Command and Control

e. Tactical Mobility

3. Policies:

a. Development of a new item or system is justified if it will

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ultimately provide an increase in FMF combat effectiveness either by replacing an existing system with one significantly better or by adding a new required capability.

b. Maximum advantage must be taken of joint or other service developments that can be adapted or utilized to fulfill Marine Corps Aviation requirements.

c. All possible aspects of compatibility with other systems and related items, both internal and external to the Marine Corps must be considered.

4. Budget Relationships:

a. The individual R&D projects contained herein, unless noted otherwise, reflect Navy RDT&E funding of the Five Year Force Structure Program VI (R&D), FY 65-70. No delineation of the apportionment of Marine Corps participation has been attempted.

SECRET

COMBAT AIR SUPPORT

201. Combat Air Support Aircraft Development of combat air support aircraft must provide the following capabilities:

a. Detect, locate, define, attack and destroy moving and stationary ground targets under both visual and all weather conditions.

b. Accurately deliver air-to-surface non-nuclear weapons, nuclear weapons, missiles and biological and chemical weapons.

c. Operate in enemy electronic warfare environments. Special aircraft must be able to detect, classify, locate, deceive, jam and assist in destruction of enemy early warning, acquisition and fire control radars as well as enemy command and control systems.

PROJECTS

Follow-on Light Attack Aircraft (VAL) - A-7A

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Light Attack Aircraft - A-7AProgram Element: 3 -- -- -- 2SOR No.: W11-26

Description & Performance: A single place, subsonic, visual attack airplane powered by a TF-30-P-6 turbofan engine. It is derived from and similar in appearance to the F-8. Characteristics and features:

Empty Weight	15,000 lb.
Gross Weight	38,000 lb.
Max. External Rack Capacity	20,000 lb. (8 stations)
Internal Fuel	1515 gal. (10,000 lb.)
Engine S. L. Thrust	10,000 lb-T
Cockpit armor	
Passive radar homer	
Approach Power Compensator	
Weapon delivery computer	

Performance is indicated by a typical mission (Hi-Lo-Hi) of delivering 3600 lb. of ordnance to a combat radius of 675 miles using internal fuel only. Ease of servicing and maintenance is a design feature.

User Unit: Attack Squadrons - VMA

Replaces: A-4 series

Advantages: Significantly increased weapons load, range and time on station. Improved navigation and attack delivery capability.

Status & Schedule: First flight scheduled for October 1965. BIS trials start early FY 67. FMF introduction begins FY 68.

RDT&E Funding: (\$1000's by FY)

<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
39,500	2300				

Cognizant Branch: AAW

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COMBAT AIR SUPPORT202. Air Support Weapons

1. Weapons development must increase the effectiveness of free-fall ordnance and air-to-surface missiles through the application of advanced warhead technology, selective delivery options and improved guidance. Such development must provide:

- a. Improved passive homing missiles with greater frequency for the destruction of enemy radars.
- b. Improved free-fall ordnance with optional retardation to provide increased lethality over larger areas.
- c. Improved anti-tank weapons.
- d. Improved aerial delivered flare.
- e. Guidance techniques to improve the range and accuracy of air-to-surface missiles.
- f. Development of dispensers, munitions and handling systems for biological and chemical weapons. Disseminators must be effective over a wide range of delivery altitudes and speeds. Systems must emphasize safety of handling to minimize lethal or incapacitating hazards.

PROJECTS

Unguided Free-Fall Bomb - SNAKEYE  
Cluster Bomb - ROCKEYE II  
Aerial Delivered Land Mine - DENEYE  
Advanced Anti-Radiation Missile - ARM I  
Short Range Air-to-Surface Weapon - WALLEYE  
Medium Range Air-to-Surface Weapon - CONDOR  
Improved Fire Bomb - FIREYE  
Hovering Flare System - BRITEYE  
CW Weapon - BIGEYE  
Chemical Weapon - PADEYE

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SNAKEYE II - Unguided Free-Fall BombProgram Element: 6 42 06 06 2SOR NO.: W11-05D

Description & Performance: A general purpose, low drag bomb that will provide choice of normal or retarded delivery with the retardation designed into the weapon. It is envisioned that this bomb will replace all present weights of GP bombs (i.e. 250, 500 and 1000 lb.) and will be optimized to a weight of probably about 500 lb. Advanced warhead technology will be included to provide higher effectiveness than GP bombs.

User Unit: Attack Squadrons - VMA, VMA(AW) and VMFA

Replaces: SNAKEYE I and Low Drag Bombs (MK 81 and MK 82)

Advantages: Provides option of retarded or unretarded fall with more effective warhead.

Status & Schedule: SNAKEYE II will not proceed further in development until complexities of the entire system which have evolved from SNAKEYE I have been resolved.

RDT&E Funding: (\$1000's by FY)

<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
2200	1350	2200	1500		

Cognizant Branch: AAW

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ROCKEYE II - - Cluster BombProgram Element: 3 -- -- -- 2SOR No.: W11-05

Description & Performance: ROCKEYE II is an anti-tank, anti-personnel cluster-type bomb consisting of a folding-fin dispenser containing about 277 fin-stabilized 2.2 inch shaped charge warheads. Loaded weight will be about 500 lb. This weapon is an outgrowth and improvement of the ROCKEYE I cluster bomb which utilizes 2.75" FFAR warheads. It will be effective against hard and soft targets.

User Unit: Attack Squadrons - VMA, VMA(AW) and VMFA

Replaces: Anti-tank/anti-material rockets

Advantages: Increased kill probability through greater lethality, accuracy and area coverage.

Status & Schedule: Operational evaluation in FY 67. Fleet Deliveries in FY 68.

RDT&E Funding: (\$1000's by FY)

<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
2968	3400	1400	500		

Cognizant Branch: AAW

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DENEYE- Aerial Delivered Land MineProgram Element: 6 32 06 39 2SOR No.: W11-20

Description & Performance: A weapon concept to permit the emplacement from aircraft of anti-tank and anti-personnel land mines. The AT mine (DENEYE I) uses a linear shaped charge and will be constructed so that the required dispersion will be achieved when delivered from a dispenser such as GLADEYE. A Target Detection Device (TDD) will make use of the vehicle signature so that the mine can distinguish tracked vehicles from other vehicles. The AP mine (DENEYE II) will be designed so that a group of AP mines can be packaged in the same general shape and size as one AT mine and will be capable of being deployed from the same dispenser. Thus a group of AP mines can directly replace one (or more) AT mines for a mixed load.

User Unit: Attack Squadrons - VMA & VMA(AW)Replaces: New capability

Advantages: Reduces time and effort to emplace land mines. Allows mining deep in enemy territory to delay vehicular and armored traffic. Permits mining of enemy airfields and railroads.

Status & Schedule: Feasibility studies and tests of preliminary design completed by NOTS. System development scheduled to start in FY 65 if funding provided.

RDT&E Funding: (\$1000's by FY)

<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
1200	1500	3200	2200	2000	1200

Cognizant Branch: AAW

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ARM I - Advanced Anti-Radiation MissileProgram Element: 6 32 06 36 2SOR No.: W11-04

Description: This missile is in the concept phase and proposes to extend the capabilities of SHRIKE in that it will include a capability against the lower frequency (L-band) GCI radars.

User Unit: Attack Squadrons - VMA, VMA(AW)

Replaces: SHRIKE

Advantages: Broader frequency coverage and homing capability against various types of radars.

Status and Schedule: Concept stage. PCP signed 7 November 1964 by Secretary of Defense directing seeker development of ARM I with significantly more guidance capability than SHRIKE. Engineering development of ARM I predicated on seeker development.

RDT&E Funding: (\$1000's by FY)

<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
0	3800	8000	8600	1600	500

Cognizant Branch: AAW

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WALLEYE - Short Range Air-to-Surface Weapon - AGM-62AProgram Element: 3 -- -- -- 2SOR No.: W11-02

Description & Performance: WALLEYE is a TV-guided glide weapon that passively homes on the target that has been visually acquired from the delivering aircraft before launch. No pilot control is required after launch. A glide range of over 20 n.m. is possible when launched from above 35,000 ft. Design CEP is less than 15 feet. Total weight is 1000 lb.; warhead is a linear-shaped charge of 850 lb. Delivering aircraft must be specially configured.

User Unit: Attack Squadrons - VMA and VMA(AW)Replaces: BULLPUPAdvantages: Automatic guidance and improved CEP.Status & Schedule: Op Eval FY 65. Fleet Deliveries 2d quarter FY 66.RDT&E Funding: (\$1000's by FY)

<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
6700	7111	3861	4100*	1300*	

\* Funding is for development of a supersonic version, WALLEYE II.

Cognizant Branch: AAW

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CONDOR - Medium Range Air-to-Surface Missile - AGM-53AProgram Element: 6 42 06 03 2SOR No.: W11-07

Description & Performance: CONDOR will be a standoff weapon with delivery ranges up to 60 miles. Tentative characteristics include: 10-20 ft. CEP, liquid rocket propulsion, 600 lb. HE warhead with nuclear alternate. Initial version will be useable in good visibility conditions only with an all weather version to follow. Control will probably utilize a TV system relaying picture of overflown terrain to launch aircraft with autopilot mid-course guidance and automatic TV terminal guidance.

User Unit: Attack Squadrons - VMA, VMA(AW)Replaces: New weaponAdvantages: Longer range and increased accuracy

Status & Schedule: In program definition phase. Development scheduled to begin FY 66. Op Eval FY 69. Fleet introduction FY 70.

RDT&E Funding: (\$1000's by FY)

<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
2300	10,000	16,000	21,000	16,000	10,000

Cognizant Branch: AAW

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SECRET

FIREYE - Improved Fire Bomb

Program Element: 6 42 06 06 2

SOR No.: W11-05H

Description and Performance: FIREYE is a high efficiency large area thermal weapon that is intended to replace all Napalm or incendiary type weapons such as the MK-77, MK-78, and the MK-79 firebombs, where large irregular target areas are present and an intense heat of comparatively long duration is required. It weighs 225 loaded with 25 gallons of filler.

User Unit: Attack Squadrons - VMA, VMA(AW) and VMFA

Replaces: MK-77, MK-78 and MK-79 fire bombs

Advantages: Compatible with all multiple carriage bomb racks; smaller, lighter and more efficient than existing fire weapons; and incorporates simple assembly features.

Status and Schedule: Presently in test and evaluation phase which is scheduled to be completed by July 1967.

RDT&E Funding: (\$1000's by FY)

<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
1000	1000	2500	1000		

Cognizant Branch: AAW

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SECRET



SECRET

BRITEYE - Hovering Flare SystemProgram Element: 6 42 06 06 2SOR No.: W11-05G

Description: An air launched, high intensity hovering flare device for use in night tactical operations. Various approaches to the hovering system, including parachute and gas bag, are being investigated. BRITEYE will be compatible with MBR, MER, TER and 14 inch suspension bomb racks.

User Unit: Attack Squadrons - VMA, VMA(AW), and VMFA

Replaces: MK-24 flare system

Advantages: Significantly longer burning time (5 min vs 2 min) and a significantly higher level of illumination (5 million cp vs 2 million cp).

Status and Schedule: Design is scheduled for completion in November 1965 with production release in April 1967. Experimental candles have been tested.

RDT&E Funding: (\$1000's by FY)

<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
1000	1000	820			

Cognizant Branch: AAW

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SECRET

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BIGEYE - Chemical Warfare WeaponProgram Element: 6 42 06 18 2SOR No.: W11-08

Description & Performance: A binary VX line source dissemination system. It generates agent from two non-hazardous materials after the weapon is released. About 225 lbs. of agent are generated. Dissemination starts from a time fuze. Total weight is 400 lbs.

User Unit: Attack Squadrons - VMA, VMA(AW)

Replaces: Additional capability

Advantages: Provides significant increase in safety of toxic weapons for storage, handling and loading utilizing binary storage of non-toxic chemicals.

Status & Schedule: Undergoing experimental design at NOTS, China Lake. Technical problems associated with mixing indicate slippage in development at this time.

RDT&E Funding: (\$1000's by FY)

<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
905	950	1500	1800	200	

Cognizant Branch: AAW

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CONFIDENTIAL

SECRET

PADEYE - Chemical WeaponProgram Element: 6 22 44 01 2SOR No.: W11-08G

Description and Performance: The PADEYE is a modified MK-12 Mod O Smoke Tank containing 210 individually fuzed grenade type BZ disseminators. The weapons is compatible with the Triple Ejector Rack (TER) and will provide effective coverage of a rectangular area 300 meters long and 15 meters wide.

User Unit: Attack Squadrons - VMA, VMA(AW), and VMFA

Replaces: None

Advantages: Pre-pack BZ and utilizes existing dispenser and bomblet. Bureau of Weapons is investigating the use of CS in the weapon.

Status & Schedule: In exploratory development. Completion of weaponization and Op Eval FY 66.

RDT&E Funding: (\$1000's by FY)

<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
265	265				

Cognizant Branch: AAW

II-II-15

SECRET

SECRET

COMBAT AIR SUPPORT

208. Combat Air Support Equipment      Equipment and subsystems must be provided to aid, assist and enhance the probability of combat air support aircraft of successfully accomplishing assigned missions. These devices will be developed to help ensure:

- a. Accurate all weather navigation to and from target areas, preferable non-radiating systems.
- b. Adequate communications for command and control of air support missions.
- c. Protection of aircraft against enemy ground fire including automatically controlled guns and missiles.
- d. Accurate delivery of all air-to-surface weapons.

PROJECTS

Integrated Light Attack Avionics System - ILAAS

Helicopter Ground Fire Suppression System

II-II-16

SECRET

CONFIDENTIAL

Integrated Light Attack Avionics System - ILAASProgram Element: 6 32 06 24 2SOR No.: W11-25

Description & Performance: This avionics systems will perform the functions to permit all weather navigation at all altitudes, penetrations in electronic warfare environments and control of selected weapons delivery methods. This equipment will be utilized in attack aircraft for all types of attack missions. It is planned that the system will be developed in two versions; the first designated as the 1967 ILAAS and the second as the 1970 ILAAS. The 1967 ILAAS will be incorporated in about number 200 Navy/Marine Corps production A-7A and subsequent.

User Unit: Attack Squadrons - VMA

Replaces: All avionics equipment in present visual attack aircraft.

Advantages: Improved sensors, greater accuracy, lower weight, less maintenance and improved reliability. Technician training requirements should be reduced.

Status & Schedule: Presently undergoing Program Definition Phase (PDP). A system contractor should be selected during FY 1965 for the 1967 system. The 1970 system should be under contract by 1st Quarter FY 1966.

RDT&E Funding: (\$1000's by FY)

<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
12,000	13,000	12,000	4,000	7,000	

Cognizant Branch: AAW

CONFIDENTIAL

Helicopter Ground Fire Suppression SystemProgram Element: 3 -- -- -- 2      SOR No.: 14-14Description & Performance: A ground fire suppression system to provide the assault support helicopter (UH-1E) a means of self protection while performing observation/reconnaissance missions over enemy terrain.User Unit: Observation Squadrons - VMOReplaces: New itemAdvantages: Provides a means to counter small arms fire directed against observation helicopters not presently available.Status & Schedule: Fifteen interim kits, with fixed, forward firing M60 guns, provided to FMFPac. Six UH-1E's will be fitted with nose turret (TAT-101) for evaluation. Published Specific Operational Requirements calls for equipping all assault support helicopters with optimum kit configuration.RDT&E Funding: (\$1000's by FY)

<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
506					

Cognizant Branch: AAW

II-II-18

CONFIDENTIAL

SECRET

ANTI-AIR WARFARE204. Aircraft and Weapons

1. Aircraft must be developed to provide the capability to defeat enemy aircraft threatening the objective area.

a. Airborne systems must possess a high kill capability against enemy aircraft to insure adequate defense in depth. All systems must be capable of operation under all weather conditions and must be highly resistant to enemy electronic countermeasures. Improvements are needed in range, accuracy, low altitude coverage, overland coverage and reliability of fire control systems and missiles.

PROJECTS

F-4B Fire Control Improvement

II-II-19

SECRET

CONFIDENTIAL

F-4B Fire Control ImprovementProgram Element: 3 -- -- -- 2SOR No.: W16-06

Description & Performance: A new AMCS (AWG-10) is being developed to provide the F-4B with the capability to detect and track targets at very low altitude while looking down from high operating altitudes. The system will consist of the APG-59 pulse doppler radar which will allow automatic lock-on against 5 square meter targets at a 60 n. m. range from high altitude. The APG-59 will not be as subject to ECM due to its narrow band width and velocity discrimination ability. The system will also provide terrain clearance, mapping and air-to-ground ranging for attack missions.

The AWG-10 will be an increase of about 200 lb. and 4.5 cubic feet over the Aero 1A AMCS (APQ-72).

User Unit: Fighter/Attack Squadrons - VMFA

Replaces: Aero 1A AMCS (APQ-72 radar) and CW pod (APR-19).

Advantages: Improved detection and tracking at low altitude and at greater ranges with improved ECCM capability. Better air-to-ground attack assistance.

Status & Schedule: Three modified F-4B's equipped for RDT&E phases. Contractor flight tests underway. Flight tests by Pt. Mugu and OPTEV in 65-66. Fleet introduction in late 66. The following numbers of aircraft are scheduled to be in Marine Corps Units on the dates indicated:

<u>6/67</u>	<u>6/68</u>	<u>6/69</u>	<u>6/70</u>	<u>6/71</u>	<u>6/72</u>	<u>6/73</u>
15	45	60	45	45	90	120

After installation of the AWG-10 and other changes, the aircraft will be designated F4J. No retrofit is planned to replace APQ-72's.

RDT&E Funding: (\$1000's by FY)

<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
3700	200				

Cognizant Branch: AAW

II-II-20

CONFIDENTIAL



SECRET

ANTI-AIR WARFARE

205. Airborne Early Warning

1. Aircraft must be developed to provide adequate airborne early warning for the objective area.

a. AEW aircraft are required to provide a landward extension of the anti-air warfare control system and to provide airborne control facilities. Such a system must be capable of detection of aircraft at all altitudes over land and water surfaces.

PROJECTS

AEW Aircraft - E-2A

II-II-21

SECRET

CONFIDENTIAL

Airborne Early Warning Aircraft - E-2AProgram Element: 3 - - - - 2Project No.: WA 011A

Description & Performance: A twin-turboprop airplane to perform early warning search and track and CIC functions. It can remain on station for five hours at a 200 n. m. radius and is capable of conducting 10 simultaneous intercepts utilizing the ATDS. It now has the AN/APS-96 radar which is effective over water only. An overland capability is under development. This capability is essential to make the system useful to the Marine Corps. The modification to achieve overland detection is extensive and expensive. It involves changes in the radar, antenna and detection processor (computer).

User Unit: Airborne Early Warning Squadron - VMW

Replaces: New capability

Advantages: Extend early warning and intercept range from objective area with increased low altitude coverage.

Status & Schedule: If complete overland detection development is successful, the earliest possible delivery of system will be FY 68.

RDT&E Funding: (\$1000's by FY)

<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
3800	2400				

Cognizant Branch: AAW

II-II-22

CONFIDENTIAL

SECRET

ANTI-AIR WARFARE206. Surface Radars

1. Surface radars must be developed to provide complete, continuous information on all air activity within and adjacent to the objective area.

a. Long range early warning radars must be able to detect aircraft at extreme ranges and very high altitudes while traveling at several times sonic speed.

b. Height finding radars must be capable of accurately determining heights of non-friendly targets at ranges, speeds and altitudes equal to search radar detection extremes.

c. Light, compact, expeditionary assault radars must be available to ensure detection of enemy aircraft during early phases of amphibious operations and to complement long-range radars.

PROJECTS

Light Weight Assault Air Surveillance Radar

II-II-23

SECRET

CONFIDENTIAL

PRIMARY TACTICAL CONTROL 3-D RADARProgram Element: 3 -- -- -- 2SOR No.:

Description & Performance: System will determine range, height and azimuth of airborne targets at ranges to 250 n.m., altitudes up to 80,000 feet and speeds to Mach 2.5, in support of MTDS. It will be helicopter transportable with a total system weight of less than 20,000 lbs.

User Unit: Air Control Squadrons - MACS

Replaces: AN/TPS-37 and AN/TPS-22A

Advantages: Provides detection at greater ranges and altitudes of higher speed targets, permitting longer reaction time.

Status & Schedule: Development contract will be let in FY 66. Estimated delivery to Marine Corps in FY 67.

RDT&E Funding: (\$1000's by FY)

656667686970

Cognizant Branch: AAW

II-II-24

CONFIDENTIAL

CONFIDENTIAL

Light Weight Amphibious Assault Air Surveillance RadarProgram Element: 6 42 18 03 3SOR No.: AA1.1

Description & Performance: A light-weight, helicopter transportable assault radar that can be emplaced in the amphibious beachhead at the earliest possible time to provide coverage for helicopter lifted assault forces. The equipment should include the latest techniques in miniaturization and packaging resulting in a radar with a weight of less than 1,500 pounds, not including power source. It should acquire one square meter targets at 200 miles, traveling at speeds up to Mach 4.0 at 100,000 feet.

User Unit: Air Control Squadron - MACSReplaces: AN/UPS-1

Status & Schedule: Design study completed December 64. Development of equipment will start in 4th quarter FY 65. Operational by FY 71.

RDT&E Funding: (\$1000's by FY)

<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
1400	900	400			

Cognizant Branch: AAW

II-II-25

CONFIDENTIAL

CONFIDENTIAL

ANTI-AIR WARFARE207. Surface to Air Weapons

1. Surface-to-air weapons must be developed that are capable of destroying all hostile aircraft and missiles that may penetrate the air defense system. Surface-to-air missile systems must have the ability to:

a. Detect, identify, track and destroy targets from sea level to 50,000 feet at speeds to include tactical ballistic missiles and rockets and air launched strategic missiles.

b. React rapidly with a high single shot kill probability.

c. Be rapidly emplaced and displaced.

d. Be integrated into the anti-air warfare command and control system.

PROJECTS

Improved Expeditionary Surface to Air Missile System

II-II-26

CONFIDENTIAL

SECRET

Improved Expeditionary Surface-to-Air Missile SystemProgram Element: 6 22 50 01 3

Description & Performance: An improved expeditionary surface-to-air missile system (HAWK ATBM/HIP) capable of countering the entire spectrum of the tactical aircraft, missile, and rocket threat of the period 1969-1975. Will provide improved reaction time, higher kill probability, increased reliability, better maintainability, increased ECM resistance, greater range and altitude, and the added capability of engaging incoming targets traveling at radial velocities up to 6,000 feet per second (3550 knots). System maximum intercept range will be approximately 22.5 nautical miles, with altitude coverage being from 50 to 60,000 feet.

User Unit: Light Anti-aircraft Missile Battalions - LAAM

Replaces: Current HAWK system.

Advantages: Greater overall operational performance, and flexibility; particularly an ability to engage targets traveling at radial velocities above 1500 feet per second (the current HAWK limitation).

Status & Schedule: First guidance flight test is January 66; completion of flight test program is April 67; first production deliveries is July 67; available to Marine Corps FY 1969.

RDT&E Funding: (\$1000's by FY; \* USMC, \*\* Army)

	<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
*	1000	500				
**	20,800	11,300	3000			

Cognizant Branch: AAW

II-II-27

SECRET

SECRET

INTELLIGENCE208. Reconnaissance Aircraft and Equipment

1. The landing force must be able to maintain around the clock aerial surveillance of the battle area and areas contiguous thereto. This must be done in all conditions of weather and visibility, day or night. A variety of types of sensor are necessary to do this effectively. There must also be the capability to respond rapidly to reconnaissance needs, to furnish a high probability of survivability and mission accomplishment and to rapidly process and disseminate the intelligence information.

PROJECTS

Mobile Multi-Sensor Interpretation System

Light Armed Reconnaissance Aircraft - LARA

II-II-28

SECRET



CONFIDENTIAL

Mobile Multi-Sensor Interpretation SystemProgram Element: 6 22 53 01 3SOR No.: 35-11T

Description & Performance: The system will provide for viewing, measuring, computing, reproducing, processing, storing and retrieving of photographic, infrared and radar data as well as electronic warfare information obtained from airborne sensors. It will be contained in a standard air-transportable shelter.

System is designed for processing of sensor data from RF-4B and EA-6A, B.

User Unit: Intelligence Units of MEF, Wings, Divisions

Replaces: New Capability

Advantages: Will increase handling rate and amount of sensor data that must be processed and handled. Will greatly enhance access to and rapid retrieval of intelligence information.

Status & Schedule: This project is under study by a joint system program office. The system is now in the system definition phase. The system is scheduled to be tested during the 2nd and 3rd quarters of CY 1966 and funds are scheduled to be released for initial production procurement during the 4th quarter of FY 1966.

RDT&E Funding: (\$1000's by FY)

<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
400*	300	1	1	1	1

Cognizant Branch: AAW

\* Deferred from FY-64

II-II-29

CONFIDENTIAL

CONFIDENTIAL

Light Armed Reconnaissance Aircraft (LARA) - OV-10AProgram Element: 6 42 06 27 2SOR No.: IT 2.6 & 11-14

Description & Performance: The light armed reconnaissance aircraft is a new type of airplane to perform a variety of missions while operating in proximity to combat troops, STOL from short, unimproved fields, roads and from aircraft carriers, including LPHs. It will be relatively small, simple to support, easy to maintain and be able to utilize JP type fuel, aviation or automotive gasoline or diesel fuel. This aircraft will be responsive to the reconnaissance needs of landing force units and be capable of destroying soft targets. Missions to be performed include visual reconnaissance and surveillance, helicopter escort and protection, limited close air support, marking of targets, spotting for artillery and naval gunfire, tactical air coordination, attack of enemy helicopters, battlefield illumination, liaison and utility.

It will be capable of sea-level speeds of 80 to 300 knots, a dive speed of over 350 knots and 3.5 hours of endurance with internal fuel (no external load). It will take off over a 50 foot obstacle within 1000 feet with 1200 lb. of external load.

User Unit: Observation Squadrons - VMO

Replaces: New capability

Advantages: No other present or programmed aircraft has the capability of effectively escorting and protecting helicopters with suitable armament and an adequate performance range.

Status & Schedule: Seven prototype aircraft to be built initially for test and operational evaluation. First flight by September 1965. All prototypes to be completed by March 1966.

RDT&E Funding: (\$1000's by FY)

<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
12,000	6,000				

Cognizant Branch: AAW

II-II-30

CONFIDENTIAL

SECRET

COMMAND AND CONTROL209. Air Control Systems

1. A tactical data system must be provided which will correlate all available data in the air situation and rapidly present such data in order that timely disposition of offensive and defensive air elements may be accomplished. If proven feasible, such a system should include control of defenses against enemy tactical missiles.

PROJECTS

Marine Corps Tactical Data System - MTDS

Aircraft Command and Control System - SKY SHIELD

II-II-31

SECRET

CONFIDENTIAL

Marine Corps Tactical Data System - MTDSProgram Element: 3 -- -- -- 3Project No.: CS-211

Description & Performance: A system to store, process and display air situation information to provide the tactical air commander with the data required to make timely and accurate decisions concerning disposition of offensive and defensive aviation units under his control. MTDS assists in the actual control of aircraft utilizing radar information.

User Unit: Air Control Squadrons - MACS

Replaces: Manual plotting boards and automates routine voice communications concerning target track data.

Advantages: Increases tracking and intercept capabilities in capacity and reaction time. Provides for improved control of all friendly aircraft in the objective area.

Status & Schedule: Prototype test system being tested with NTDS and ATDS. Contract awarded for seven operating centrals.

RDT&E Funding: (\$1000's by FY)

<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
3500	3000	2000	2000	2000	

Cognizant Branch: AAM

II-II-32

CONFIDENTIAL

CONFIDENTIAL

Aircraft Command and Control System - SKY SHIELDProgram Element: 6 22 53 01 3

Description & Performance: This is a system to provide defense against all air targets including guided or unguided missiles as well as manned aircraft. This system includes all radiating and non-radiating detection, tracking, and attacking devices. Air traffic control and air support activities are integrated. This system must be highly transportable and capable of completely automatic operation with manual override. The system must defend the designated area in depth with a kill range of 300 miles in all directions at altitudes up to 100 miles. Scheduled as an integral part of the Advanced Command Data System - Navy/Marine Corps.

User Unit: Division/Wing TeamReplaces: MTDS, DASC and MATCU

Advantages: Integrates all aviation control elements. Improves defense against ballistic missiles.

Status & Schedule: Feasibility study in progress. Development, as a part of the Advanced Command Data System, scheduled to begin in FY 67. System to be operational in FY 73.

RDT&E Funding: (\$1000's by FY) (MarCor portion of ACDS)

<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
500	400	500	500	500	550

Cognizant Branch: AAW

II-II-33

CONFIDENTIAL

SECRET

COMMAND AND CONTROL210. Air Support Guidance Systems

1. A system must be developed to provide for all-weather radar guidance of close air support aircraft against multiple targets. If proven feasible, these systems may be utilized for terminal control of surface-to-surface missiles.

PROJECTS

Close Air Support Control System - AN/TPQ-17

II-II-34

SECRET

CONFIDENTIAL

Close Air Support Control System - AN/TPQ-17Program Element: 6 42 18 01 3SOR No.:

Description & Performance: The equipment will be a second generation of equipment for the Air Support Radar Teams. Capabilities will include 3-D control of aircraft to Mach 2, track-while-scan radar, low level aircraft control and delivery and provide evasive action as necessary. Overall weight not to exceed 4000 lb.

User Unit: Air Support Squadron - MASS

Replaces: AN/TPQ-10

Advantages: Greater control and drop accuracy, increased range, track-while-scan and improved aircraft pick-up capability with limited multiple aircraft control.

Status & Schedule: Contracted study underway to determine the characteristics of the equipment. BuShips will prepare Technical Development Plan following study.

RDT&E Funding: Funded within the DASC Program.

Cognizant Branch: AAW

SECRET

COMMAND AND CONTROL211. Traffic Control and Navigation

1. Air traffic control and navigation systems must be developed to provide for the expeditious and safe control of large numbers of aircraft to and from expeditionary airfields under all weather conditions. Such systems shall be capable of automatic, semi-automatic or manual operation in controlling aircraft in area traffic control, final approach control and departure control.

PROJECTS

Marine Air Traffic Control and Landing System - MATCAL

II-II-36

SECRET



CONFIDENTIAL

Marine Air Traffic Control and Landing System - MATCALProgram Element: 6 22 11 01 2ADO No.: 34-07X

Description & Performance: This system will provide automatic control of aircraft from the handover from MTDS to the final approach and landing. The final approach will provide precision control of aircraft from a 12 mile gate to touchdown at a SATS or forward airfield. The system will automatically and continuously track and control several aircraft in the final approach with one minute intervals. It will be compatible with future airborne data link systems. System will incorporate previous TAILS development.

User Unit: Air Traffic Control Unit - MATCUReplaces: Manual- Voice control of aircraft.Advantages: Increases traffic handling capability and safety of flight for high performance aircraft.

Status & Schedule: Tentative Specific Operational Requirement (TSOR) and Proposed Technical Approach (PTA) (by BuShips) have been cancelled and superceded by ADO 3407. Development underway on final approach portion.

RDT&E Funding: (\$1000's by FY)

<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
	0	2000	1000	1000	

Cognizant Branch: AAW

II-II-37

CONFIDENTIAL

SECRET

COMMAND AND CONTROL212. Airborne Communications and Navigation

1. Improved communications equipment must be provided for helicopters and fixed wing aircraft to provide for reliable communications over long distances at low altitudes. These systems must allow continuous communications between all aircraft and ground command and control agencies without line of sight restrictions.

PROJECTS

Single Sideband HF Radio for Tractical Aircraft - AN/ARC-104

II-II-38

SECRET

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Single Sideband HF Radio for Tactical Aircraft - AN/ARC-104Program Element: 6 22 15 01 2

Description & Performance: A Single Sideband HF radio for fighter, attack, reconnaissance and electronic warfare aircraft for long range communications in the 2 to 30 megacycle range. It will permit communications with low altitude flights at ranges not possible with VHF or UHF equipment.

User Unit: Tactical Squadrons - VMF, VMA and VMCF

Replaces: New item.

Advantages: Permits command and control of tactical aircraft at longer ranges than now attainable.

Status & Schedule: Contractor testing underway. First R&D set delivered to NADC Johnsville in July 65 for design approval. Release for production possibly in Fall 1965.

RDT&E Funding: Internally in BuWeps

Cognizant Branch: AAW

II-II-39

CONFIDENTIAL

SECRET

TACTICAL MOBILITY213. Assault Transport Aircraft and Supporting Systems

1. VTOL and STOL assault transport vehicles must be developed to provide for the expeditious movement of assault elements of the division/wing team during the ship to shore movement and for subsequent operations ashore. Development must include integrated cargo handling systems, increased range-payload capabilities, improved navigation and communication equipment and improved capability to operate under expeditionary conditions. Emergency resupply capability by air-drop will be included in all fixed wing transport designs.

PROJECTS

Heavy Assault Transport Helicopter - CH-53A  
VTOL Assault Transport Aircraft  
Helicopter All Weather Navigation System - IHAS

II-II-40

SECRET

CONFIDENTIAL

Heavy Assault Transport Helicopter - CH-53AProgram Element: 3 -- -- -- 2SOR No.: W14-06

Description & Performance: A twin-turbine powered (T-64) helicopter with single main rotor and tail rotor, water tight hull, rear loading ramp and an integrated cargo handling system. Primary mission is all-weather movement of cargo and equipment and secondarily to transport troops, in amphibious assault and operations ashore. Will carry 8000 pounds of cargo or 30 troops to a combat radius of 100 n. m. at speeds above 150 knots. The CH-53A is being produced by Sikorsky Aircraft.

User Unit: Heavy Helicopter Squadrons - HMMH

Replaces: CH-37C

Advantages: Increased range and payload at higher cruising speeds, substantially improving airlift capability.

Status & Schedule: First official flight in Nov. 1964. Navy Preliminary Evaluation (NPE) scheduled for Spring 1965. BIS Trials to start April 1966. FMF introduction May 1966.

RDT&E Funding: Completed

Cognizant Branch: AAW

II-II-41

CONFIDENTIAL

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VTOL Assault Transport Aircraft - XC-142AProgram Element: 6 34 06 33 4SOR No.: W14-11X (ADO)

Description & Performance: Requirement calls for carrying an 8000 lb. payload to a 100 n.m. radius at 250 knots, and a maximum speed of 400 knots. The XC-142A advanced development program will produce an aircraft that will approach this performance. The XC-142A is a 4-engine (turbo-prop, T64-1), tilt-wing, VTOL transport airplane with a VTO mission gross weight of about 38,000 lb. Cross shafting of all engines to all (four) propellers permits economical cruising using two engines to all (four) propellers. Its cargo compartment is slightly larger than the CH-53A compartment and 32 troops can be carried. The XC-142A is a joint service project funded by the USAF.

User Unit: Assault Transport SquadronsReplaces: CH-53A (potentially)Advantages: Greater speed and range will increase assault lift capability.

Status & Schedule: Of five XC-142A aircraft scheduled, two have flown, including hover and transition. The last two aircraft will be used to conduct joint service operational suitability tests at Edwards AFB starting in May 1965. A Marine Corps pilot will participate.

RDT&E Funding: (\$1000's by FY, USAF Funds)

<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
26,000	3000				

Cognizant Branch: AAW

II-II-42

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Helicopter All Weather Navigation System - IHASProgram Element: 3 -- -- -- 2SOR No.: W14-09

Description & Performance: The Integrated Helicopter Avionics System (IHAS) will combine the following subsystems to permit amphibious vertical assault operations and subsequent support ashore under all weather conditions.

1. Navigation - accuracy of one-half % of distance traveled.
2. Terrain Avoidance/ following - 200 feet above terrain CH-53.
3. Station keeping - 32 aircraft.

High availability, ease of maintenance and reduced technician needs at squadron level will be made possible by rapid isolation of faults and quick replacement of faulty circuit cards.

User Unit: Helicopter Transport Squadrons - HMMH and HMM

Replaces: New item

Advantages: Permits all weather operation of transport helicopters in assault and support operations.

Status & Schedule: Program Definition Phase (PDP) has been completed. Proposals under evaluation by BuWeps. A contract for development and production of the complete CH-53 system is expected to be signed in March 1965. Fleet delivery of a complete IHAS is expected in February 1967.

RDT&E Funding: (\$1000's by FY)

<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
2,000					

Cognizant Branch: AAW

II-II-43

CONFIDENTIAL  
(REVERSE BLANK)

PART II  
CHAPTER III  
AVIATION MANPOWER SUB-PROGRAM, FY 65-75

300. Description

1. The Aviation Manpower Sub-Program portrays the officer and enlisted requirements generated by the aviation peace and war structures as currently programmed for the mid-range period. This sub-program further sets forth end-year strength objectives for the active duty portion of the aviation component and the distribution of naval aviators, aviation ground officers and enlisted personnel by functional category within that component.

301. Objectives

1. The primary objective of this sub-program is to define current and future personnel requirements in such a manner as to facilitate the establishment, operation and evaluation of personnel training and management programs.

302. Manpower Data

1. Appendix 1 to Chapter 3 depicts the Aviation Troop List for Fiscal Years 1965 through 1975, the allocation of aircraft for each unit, the Table of Organization strength for each unit, the Table of Organization strength for Marine Aircraft Wings by location, the authorized manning levels for each unit, total station loads, and the major program objectives for new equipment, increased inventory, other unit augmentations, and the continuance of existing organizations.

2. Appendix 2 to Chapter 3 depicts the major units, aircraft, and personnel required for mobilization units during wartime (for other requirements see applicable MCP) for the 4th Marine Aircraft Wing, and for augmenting the three in-being Marine Aircraft Wings to 100% of T/O.



3. Appendix 3 to Chapter 3 depicts the allocation of Aviation personnel by major utilization/employment/functional category (DOD Program Element) as authorized by the Five Year Force Structure and Financial Program. Examples of the types of billets/assignments included in the less definitive DOD element titles are as follows:

0706-12013 HQ Command Support: MCLFDC, MCS, Quantico; MCAS Quantico Less HMX-1; MAD Pax River.

0754-60013 Command-Direction: HQMC; Navy Dept.

0754-82013 Other Support Act: HMX-1; Pilot Exchange U. S. Air Force; FAA Western Region; FAA Southern Region.

MISC ELEMENTS: HQ CONAD; Marine Detachments; Project Officers; Fleet Comd Staffs; MAD Pt. Mugu; Service Academy; Recruit Training; Departmental Intell Act; Field Comd Intell Activities; MC Pers Asgd DIA; ASO Phila; Allied and Unified Commands; Pilot Exchanges, Navy; DEEPFREEZE; Avn Saf Cen. NAS NORVA; MC Pers Assgd DASA.

This Appendix does not include approximately 175 officers and 50 enlisted employed in Fleet Marine Force Ground Organizations (not including cross training billets) reimburseable billets (Financial responsibility of Non-DOD government agencies); and unrecorded classified assignments.

4. Current Fiscal Year manning level percentages and other information for individual units and aggregates are delineated in applicable Marine Corps Bulletin 05320 (Projection of Personnel Strengths for Fleet Marine Force, Aviation Units). This directive is further supplemented by detailed grade and MOS summaries for deploying squadrons, and by detailed administrative instructions set forth in Marine Corps Order 1300.18A.



SECRET

END FISCAL YEAR 1966

OBJECTIVES				FYFS&FP (MANNING LEVEL)				TABLE OF ORGANIZATION (T.O.)				NAVY		AUTH	
PERSONNEL				AIRCRAFT	OFF	(NA)	(NAO)(AG)	ENL	OFF	(NA)	(NAO)(AG)	ENL	OFF/ENL	AIRCRAFT	
OFF	(NA)	(NAO)(AG)	ENL												
				3-C117D 1-VIIA 3-T1A 4-TC45J 2-UH34D 1-C54 1-C117D 1-C131F 2-T1A 1-TC45J	93	(22)	-	(71)	656					3-C117D 1-VIIA 3-T33 4-TC45J 2-UH34D 1-C54 1-C117D 1-C131F 2-T1A 1-TC45J 21-TP9J 1-TA4E	MCAS EL TORO  

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OBJECTIVES				FYFS&FP (MANNING LEVEL)				TABLE OF ORGANIZATION (T.O.)				NAVY		AUTH	
PERSONNEL												OFF/ENL		AIRCRAFT	
OFF (NA)	NAO (AG)	ENL	AIRCRAFT	OFF (NA)	NAO (AG)	ENL	AIRCRAFT	OFF (NA)	NAO (AG)	ENL	AIRCRAFT	OFF/ENL	AIRCRAFT		
			3-C4B 3-T1A 5-VTAPX 2-UH34D 1-T39 1-C54	93 (22)	-	(71)	656							2-C112D 3-T33 2-UH34D	MCAS EL TORO
		#16	1-C112D 1-C131F 1-T1A 2-VTAPX 2-TA4E 15-F4B	20 (14)	-	(6)	104					5/6	1-C112D 1-C131F 2-T1A	AIRFMPPAC HDQTS SQDN HDQTS	
#5	-	(#5)	#133	32 (28)	-	(4)	389							2-TA4E	VMT-2
				107 (42)	(1)	(64)	651	126 (42)	(1)	(83)	651	11/18		3D MAW	
				30 (9)	-	(21)	140	33 (9)	-	(24)	140	23/35		MWHG-3	
				34 (8)	-	(26)	321	36 (8)	-	(28)	321			HHS-3	
				16 (5)	-	(11)	438	20 (5)	-	(15)	492	4/17		MASS-3	
				14 (8)	-	(6)	204	14 (8)	-	(6)	204			FOR.DENT. CO	
#1	-	(#1)	#6	1-C112 3-C130 4-TA4E	14 (8)	-	(6)	204	14 (8)	-	(6)	204		MWSG-37	
#18 (#18)	-	-	#125	18-RC130 9-E2A	39 (36)	-	(3)	276	52 (48)	-	(4)	276	1/3	MHS-37 MBS-37 MAMS-37	
#56 (#25)	(#25)	(#6)	#246											VMGR-352	
														VMW-3	
#1	-	(#1)	#6	1-C112 3-TA4E	32 (16)	-	(16)	372	34 (16)	-	(18)	372		MAG-33	
				20 (6)	-	(14)	370	22 (6)	-	(16)	452	6/18		HMS-33	
				46 (21)	(21)	(4)	285	58 (26)	(26)	(6)	285	1/4		MBS-33	
				46 (21)	(21)	(6)	285	58 (26)	(26)	(6)	285	1/4		VMFA	
#16 (#8)	(#8)	-	#59	15-A6A	38 (17)	(17)	(4)	254	48 (21)	(21)	(6)	254	1/4	15-F4J	
				38 (17)	(17)	(4)	271	48 (21)	(21)	(6)	271	1/4		12-A6A	
#35 (#17)	(#17)	(#4)	#238	12-RF4B 12-EAGB	10 (2)	-	(8)	54	10 (2)	-	(8)	54		12-RF4B	VMA
														VMCJ-3	
														X	MATCU-75
#1	-	(#1)	#6	1-C112 3-TA4E	32 (16)	-	(16)	403	34 (16)	-	(18)	403		1-C112	MAG-15
				20 (6)	-	(14)	370	22 (6)	-	(16)	452	6/18		HMS-15	
				46 (21)	(21)	(4)	273	58 (26)	(26)	(6)	273	1/4		MBS-15	
				46 (21)	(21)	(4)	273	58 (26)	(26)	(6)	273	1/4		VMFA	
#16 (#8)	(#8)	-	#59	15-A6A	38 (17)	(17)	(4)	254	48 (21)	(21)	(6)	254	1/4	15-F4B	
				32 (28)	-	(4)	184	41 (35)	-	(6)	184	1/4		12-A6A	
				10 (2)	-	(8)	54	10 (2)	-	(8)	54			20-A4E	VMA
														X	MATCU-70
															TOTALS (PERSONNEL)
#144 (#76)	(#58)	(#10)	#971	111 (80)	-	(31)	444	830 (370)	(168)	(292)	5950	59/144		HQ FMF	
				694 (319)	(136)	(239)	5730							MAW	
				93 (22)	-	(71)	656							MCAS, MCAF	
				5 -	-	(5)	11							CIT	
				42 -	-	(42)	162							FMF NAVY	
				36 -	-	(36)	99							STATION NAVY	
				981 (421)	(136)	(424)	7102							EL TORO BASE LOAD	
				18 (8)	-	(10)	147							MCAF SANTA ANA	
#1	-	(#1)	#6	32 (16)	-	(16)	447	36 (16)	-	(20)	447			MAG-36	
				27 (10)	-	(17)	555	30 (10)	-	(20)	594	4/10		HMS-36	
				57 (53)	-	(4)	181	65 (60)	-	(5)	181	1/3		MBS-36	
				57 (53)	-	(4)	181	65 (60)	-	(5)	181	1/3		HMM	
				57 (53)	-	(4)	181	65 (60)	-	(5)	181	1/3		HMM	
				57 (53)	-	(4)	181	65 (60)	-	(5)	181	1/3		HMM	
				57 (53)	-	(4)	181	65 (60)	-	(5)	181	1/3		HMM	
				57 (53)	-	(4)	181	65 (60)	-	(5)	181	1/3		HMM	
				57 (53)	-	(4)	181	65 (60)	-	(5)	181	1/3		HMM	
				76 (72)	-	(4)	233	80 (75)	-	(5)	233	1/4		30CH53A	HMM-462
				10 (2)	-	(8)	54	10 (2)	-	(8)	54			HMM-463	
				25 (6)	-	(19)	223	28 (6)	-	(22)	223	-/3		MATCU-68	
				25 (6)	-	(19)	223	28 (6)	-	(22)	223	-/3		MAGS-3	
														MAGS	
#1	-	(#1)	#52	537 (430)	-	(107)	2821	602 (475)	-	(127)	2860	11/38		TOTALS (PERSONNEL)	
				18 (8)	-	(10)	147							MAW	
				7 -	-	(7)	13							MCAS, MCAF	
				5 -	-	(5)	6							FMF NAVY	
														STATION NAVY	
				567 (438)	-	(129)	2987							SANTA ANA BASE LOAD	

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OBJECTIVES				FYFS&FP (MANNING LEVEL)				TABLE OF ORGANIZATION (T.O.)				NAVY		AUTH		
PERSONNEL				AIRCRAFT	OFF	(NA)	(NAO)	(AG)	ENL	OFF	(NA)	(NAO)	(AG)	ENL	OFF/ENL	AIRCRAFT
OFF	(NA)	(NAO)	(AG)													
				3-C4B 3-T1A 5-VTAPX 2-UH34D	93	(22)	-	(71)	656							MCAS EL TORO
				1-C54 1-C117D 1-C131F 2-T39 2-VTAPX 9-TA4E 15-F4B/D	20	(14)	-	(6)	104					5/6		AIRFMFPAC HDQTS SQDN HDQTS
#5	-	-	(#5)	#133	32	(28)	-	(4)	389							24-TA4E VMT-2
					107	(42)	(1)	(64)	651	126	(42)	(1)	(83)	651	11/18	3D MAW MWHG-3
					30	(9)	-	(21)	140	33	(9)	-	(24)	140	-/3	H&MS-3 MASS-3
															23/35	FOR. DENT. CO MSG-37
					34	(8)	-	(26)	321	36	(8)	-	(28)	321		H&MS-37
					16	(5)	-	(11)	430	20	(5)	-	(15)	492	4/17	MARS-37
#1	-	-	(#1)	#6	14	(8)	-	(6)	204	14	(8)	-	(6)	204		MAMS-37
				4-C130 4-TA4E 18-RC130 9-E2A	39	(36)	-	(3)	276	52	(48)	-	(4)	276	1/3	4-C117 4-T1A 12-RC130
#18 (#18)	-	-		#125												VMGR-352
#56 (#25) (#25) (#6)				#246												VMW-3
																MAG-33
#1	-	-	(#1)	#6	32	(16)	-	(16)	372	34	(16)	-	(18)	372		H&MS-33
				1-C117 3-TA4E	20	(6)	-	(14)	364	22	(6)	-	(16)	452	6/18	1-C47 3-T1A
				#88	46	(21)	(21)	(4)	285	58	(26)	(26)	(6)	285	1/4	15-F4J
				#1	46	(21)	(21)	(4)	285	58	(26)	(26)	(6)	285	1/4	15-F4B
#16 (#8) (#8)	-	-		#59	38	(17)	(17)	(4)	254	48	(21)	(21)	(6)	254	1/4	15-F4B
				#1	38	(17)	(17)	(4)	271	48	(21)	(21)	(6)	271	1/4	12-A6A
#35 (#17) (#17) (#10)				#238												12-RF4B
					10	(2)	-	(8)	54	10	(2)	-	(8)	54		X
#1	-	-	(#1)	#6	32	(16)	-	(16)	403	34	(16)	-	(18)	403		1-C47 3-T1A
				1-C130 3-TA4E	20	(6)	-	(14)	370	22	(6)	-	(16)	452	6/18	1-C47 3-T1A
				#88	46	(21)	(21)	(4)	273	58	(26)	(26)	(6)	273	1/4	15-F4B
				#1	46	(21)	(21)	(4)	273	58	(26)	(26)	(6)	273	1/4	15-F4B
#16 (#8) (#8)	-	-		#59	38	(17)	(17)	(4)	254	48	(21)	(21)	(6)	254	1/4	15-F4B
				#1	32	(28)	-	(4)	285	41	(35)	-	(6)	285	1/4	12-A6A
					10	(2)	-	(8)	54	10	(2)	-	(8)	54		20-A7A
																X
					111	(80)	-	(31)	444							TOTALS (PERSONNEL)
#144 (#76) (#59) (#10)				#989	594	(319)	(136)	(239)	5813	830	(370)	(168)	(292)	6051	59/144	HD FMP
					93	(22)	-	(71)	656							MAW
					5	-	-	(5)	11							MCAS, MCAF
					42	-	-	(42)	162							CIT
					36	-	-	(36)	99							FMP NAVY
																STATION NAVY
					981	(421)	(136)	(424)	7185							EL TORO BASE LOAD
					18	(8)	-	(10)	147							MCAP SANTA ANA
																MAG-36
#1	-	-	(#1)	#6	32	(16)	-	(16)	447	36	(16)	-	(20)	447		H&MS-36
				#42	28	(10)	-	(18)	552	30	(10)	-	(20)	594	4/10	MARS-36
				#1	57	(53)	-	(4)	181	65	(60)	-	(5)	181	1/3	24-CH/6A
				#1	57	(53)	-	(4)	181	65	(60)	-	(5)	181	1/3	24-CH/6A
				#1	57	(53)	-	(4)	181	65	(60)	-	(5)	181	1/3	24-CH/6A
				#1	57	(53)	-	(4)	181	65	(60)	-	(5)	181	1/3	24-CH/6A
				#1	57	(53)	-	(4)	181	65	(60)	-	(5)	181	1/3	24-CH/6A
				#1	57	(53)	-	(4)	181	65	(60)	-	(5)	181	1/3	24-CH/6A
				#1	57	(53)	-	(4)	181	65	(60)	-	(5)	181	1/3	24-CH/6A
				#1	76	(72)	-	(4)	233	80	(75)	-	(5)	233	1/4	30-CH/6A
					10	(2)	-	(8)	54	10	(2)	-	(8)	54		X
					25	(6)	-	(19)	223	28	(6)	-	(22)	223	-/3	RMH-463
					25	(6)	-	(19)	223	28	(6)	-	(22)	223	-/3	MATCU-68
																MARS-3
																MARS
#1	-	-	(#1)	#55	538	(430)	-	(108)	2818	602	(475)	-	(127)	2860	11/38	TOTALS (PERSONNEL)
					18	(8)	-	(10)	147							MAW
					7	-	-	(7)	13							MCAS, MCAF
					5	-	-	(5)	6							FMP NAVY
																STATION NAVY
					568	(438)	-	(130)	2984							SANTA ANA BASE LOAD

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OBJECTIVES					FYFS&FP (MANNING LEVEL)					TABLE OF ORGANIZATION (T.O.)					NAVY		AUTH	
PERSONNEL					AIRCRAFT													AIRCRAFT
OFF	(NA)	(NAO)	(AG)	ENL		OFF	(NA)	(NAO)	(AG)	ENL	OFF	(NA)	(NAO)	(AG)	ENL	OFF/ENL		
					3-C4B												MCAS EL TORO	
					3-TIA													
					5-VTAPX												AIRFMFPAC	
					2-UH34D												HDQTS SQDN	
					1-C131F												HDQTS	
					1-C4B													
					2-T39													
					2-VTAPX													
					9-VTAPX												VMT-2	
					9-F4J													
					6-VF-FR												3D MAW	
26	(42)	(1)	(83)	651													MWHG-3	
33	(9)	-	(24)	140													H&MS-3	
																	MASS-3	
36	(8)	-	(28)	321													FOR.DENT. CO	
20	(5)	-	(15)	492													MWSG-37	
15	(8)	-	(7)	210													H&MS-37	
					4-C130												MABS-37	
					4-VTAPX													
58	(54)	-	(4)	401	18-VCA												VMGR-352	
56	(25)	(25)	(6)	246	9-EZA												VMM-3	
35	(16)	-	(19)	378	1-C130												MAG-33	
					3-TALE												H&MS-33	
22	(6)	-	(16)	452														
48	(21)	(21)	(6)	286	15-F4J												MABS-33	
48	(21)	(21)	(6)	286	15-F4J												VMFA	
48	(21)	(21)	(6)	313	15-A6A												VMFA	
75	(34)	(34)	(7)	510	12-RF4B												VMA	
					12-EA6B												VMCJ-3	
10	(2)	-	(8)	54	X												MATCU-75	
					1-C130												MAG-15	
35	(16)	-	(19)	409	3-TALE												H&MS-15	
22	(6)	-	(16)	452														
48	(21)	(21)	(6)	286	15-F4J												MABS-15	
48	(21)	(21)	(6)	274	15-F4B												VMFA	
48	(21)	(21)	(6)	313	15-A6A												VMFA	
34	(28)	-	(6)	286	20-A7A												VMA	
10	(2)	-	(8)	54	X												MATCU-70	
875	(387)	(86)	(302)	6814													TOTALS (PERSONNEL)	
																	HQ FMP	
																	MAW	
																	MCAS, MCAF	
																	CIT	
																	FMP NAVY	
																	STATION NAVY	
																	EL TORO BASE LOAD	
																	MCAF SANTA ANA	
37	(16)	-	(21)	453													MAG-36	
30	(10)	-	(20)	594													H&MS-36	
58	(53)	-	(5)	182	24-HMX												MABS-36	
58	(53)	-	(5)	182	24-CH46A												HMM	
58	(53)	-	(5)	182	24-CH46A												HMM	
58	(53)	-	(5)	182	24-CH46A												HMM	
58	(53)	-	(5)	182	24-CH46A												HMM	
58	(53)	-	(5)	182	24-CH46A												HMM	
58	(53)	-	(5)	182	24-CH46A												HMM	
77	(72)	-	(5)	234	30-CH53A												HMM-462	
10	(2)	-	(8)	54	X												HMM-463	
28	(6)	-	(22)	223													MATCU-68	
28	(6)	-	(22)	223													MACS-3	
																	MACS	
558	(430)	-	(128)	2873													TOTALS (PERSONNEL)	
																	MAW	
																	MCAS, MCAF	
																	FMP NAVY	
																	STATION NAVY	
																	SANTA ANA BASE LOAD	

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OBJECTIVES					FYFS&FP (MANNING LEVEL)					TABLE OF ORGANIZATION (T.O.)					NAVY		AUTH	
PERSONNEL					AIRCRAFT													AIRCRAFT
OFF	(NA)	(NAO)	(AG)	ENL		OFF	(NA)	(NAO)	(AG)	ENL	OFF	(NA)	(NAO)	(AG)	ENL	OFF/ENL		
					3-C4B												MCAS EL TORO	
					3-T1A													
					5-VTAPX												AIRFMPAC	
					2-UH34D												HDQTS SQDN	
																	HDQTS	
					2-C4B													
					2-T39													
					2-VTAPX													
					9-VTAJX												VMT-2	
					9-F4J													
					6-WF-FB												3D MAW	
126	(42)	(1)	(83)	651													MWRG-3	
33	(9)	-	(24)	140													HMS-3	
																	MASS-3	
																	FOR. DENT. CO	
																	MMSG-37	
36	(8)	-	(28)	321													HMS-37	
20	(5)	-	(15)	492													MARS-37	
15	(8)	-	(7)	210													MARS-37	
					4-C130													
					4-VTAJX													
58	(54)	-	(4)	401	18-VGX												VMGR-352	
56	(25)	(25)	(6)	246	9-E2A												VMH-3	
																	MAG-33	
35	(16)	-	(19)	378	1-C130												HMS-33	
					3-TA4E													
22	(6)	-	(16)	452													MARS-33	
48	(21)	(21)	(6)	286	15-F4J												VMFA	
48	(21)	(21)	(6)	286	15-F4J												VMFA	
48	(21)	(21)	(6)	313	15-AGA												VMA	
75	(34)	(34)	(7)	510	12-FA6B												VMCJ-3	
					12-VFPX													
10	(2)	-	(8)	54	X												MATCU-75	
																	MAG-15	
35	(16)	-	(19)	409	1-C130												HMS-15	
					3-TA4E													
22	(6)	-	(16)	452													MARS-15	
48	(21)	(21)	(6)	286	15-F4J												VMFA	
48	(21)	(21)	(6)	304	15-WF-FB												VMFA	
48	(21)	(21)	(6)	313	15-AGA												VMA	
34	(28)	-	(6)	286	20-A7A												VMA	
10	(2)	-	(8)	54	X												MATCU-70	
875	(387)	(889)	(302)	6844													TOTALS (PERSONNEL)	
																	HO FMP	
																	MAW	
																	MCAS, MCAF	
																	CIT	
																	FMP NAVY	
																	STATION NAVY	
																	EL TORO BASE LOAD	
																	MCAS SANTA ANA	
																	MAG-36	
37	(16)	-	(21)	453													HMS-36	
30	(10)	-	(20)	394													MARS-36	
58	(53)	-	(5)	182	24-HMX												HMM	
58	(53)	-	(5)	182	24-HMX												HMM	
58	(53)	-	(5)	182	24-CH26A												HMM	
58	(53)	-	(5)	182	24-CH26A												HMM	
58	(53)	-	(5)	182	24-CH26A												HMM	
58	(53)	-	(5)	182	24-CH26A												HMM	
58	(53)	-	(5)	182	24-CH26A												HMM	
77	(72)	-	(5)	234	10-HMX												RMH-462	
					11-CH53A													
10	(2)	-	(8)	54	X												RMH-463	
28	(6)	-	(22)	223													MATCU-68	
28	(6)	-	(22)	223													MACS-3	
																	MACS	
558	(430)	-	(128)	2873													TOTALS (PERSONNEL)	
																	MAW	
																	MCAS, MCAF	
																	FMP NAVY	
																	STATION NAVY	
																	SANTA ANA BASE LOAD	

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OBJECTIVES					FYFS&FP (MANNING LEVEL)					TABLE OF ORGANIZATION (T.O.)					NAVY		AUTH	
PERSONNEL					AIRCRAFT													AIRCRAFT
OFF	(NA)	(NAO)	(AO)	ENL		OFF	(NA)	(NAO)	(AO)	ENL	OFF	(NA)	(NAO)	(AO)	ENL	OFF/ENL		
					3-C4B												MCAS EL TORO	
					3-T1A													
					5-VTAPX													
					2-UH34D													
					2-C4B												AIRPMPPAC	
					2-T39												HDQTS SQDN	
					2-VTAPX												HDQTS	
					9-VTAPX												VMT-2	
					6-F4J												3D MAW	
					6-VF-FB												MWBG-3	
126	(42)	(1)	(83)	651													HARS-3	
33	(9)	-	(26)	160													MASS-3	
																	FOR DENT. CO	
36	(8)	-	(28)	321													MWBG-37	
20	(3)	-	(13)	492													HARS-37	
13	(8)	-	(7)	210													MASS-37	
					4-C130												MASS-37	
					4-VTAPX												VMGR-352	
58	(24)	-	(4)	401	18-VOL												VMW-3	
56	(25)	(25)	(8)	266	9-E2A												MAG-33	
35	(16)	-	(19)	378	1-C130												HARS-33	
					3-VTAPX												MASS-33	
22	(6)	-	(16)	452													VMFA	
48	(21)	(21)	(6)	286	15-F4J												VMFA	
48	(21)	(21)	(6)	286	15-F4J												VMFA	
48	(21)	(21)	(6)	313	15-A6A												VMFA	
75	(34)	(34)	(7)	510	12-VFPX												VMCJ-3	
					3-F4B												MATCU-75	
10	(2)	-	(8)	54	9-VAONX												MAG-15	
35	(16)	-	(19)	409	1-C130												HARS-15	
					3-VTAPX												MASS-15	
22	(6)	-	(16)	452													VMFA	
48	(21)	(21)	(6)	286	15-VF-FB												VMFA	
48	(21)	(21)	(6)	304	15-VF-FB												VMFA	
48	(21)	(21)	(6)	313	15-A6A												VMFA	
34	(28)	-	(6)	286	20-A7A												VMFA	
10	(2)	-	(8)	54	x												MATCU-70	
																	TOTALS (PERSONNEL)	
875	(387)	(46)	(302)	5862													HO FMP	
																	MAW	
																	MCAS, MCAF	
																	CVA	
																	FMP NAVY	
																	STATION NAVY	
																	EL TORO BASE LOAD	
																	MCAS SANTA ANA	
																	MAG-36	
37	(16)	-	(21)	453													HARS-36	
30	(10)	-	(20)	594													MASS-36	
58	(53)	-	(5)	182	24-HMX												HMM	
58	(53)	-	(5)	182	24-HMX												HMM	
58	(53)	-	(5)	182	24-HMX												HMM	
58	(53)	-	(5)	182	24-CH46A												HMM	
58	(53)	-	(5)	182	24-CH46A												HMM	
58	(53)	-	(5)	182	24-CH46A												HMM	
77	(72)	-	(5)	234	30-HMX												HMM-462	
10	(2)	-	(8)	54	x												HMM-463	
28	(6)	-	(22)	223													MATCU-68	
28	(6)	-	(22)	223													MASS-3	
																	MASS	
558	(430)	-	(128)	2873													TOTALS (PERSONNEL)	
																	MAW	
																	MCAS, MCAF	
																	FMP NAVY	
																	STATION NAVY	
																	SANTA ANA BASE LOAD	

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## OBJECTIVES

**FYFS&FP  
(MANNING LEVEL)**

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OBJECTIVES					FYFS&FP (MANNING LEVEL)					TABLE OF ORGANIZATION (T.O.)					NAVY		AUMN	
PERSONNEL															OFF/ENL		AIRCRAFT	
OFF	(NA)	(NAO)	(AO)	ENL	AIRCRAFT	OFF	(NA)	(NAO)	(AO)	ENL	AIRCRAFT	OFF	(NA)	(NAO)	(AO)	ENL	OFF/ENL	AIRCRAFT
						1	(1)	-	-	21								MCALF PENDLETON
						45	(36)	-	(9)	220								VMO-6
						45	(36)	-	(9)	220								TOTALS (PERSONNEL)
						1	(1)	-	-	21								MAW
						-	-	-	-	2								MCALF
						46	(37)	-	(9)	243								PMF NAVY
						49	(17)	-	(32)	439								PENDLETON BASE LOAD
						4	(3)	-	(1)	146								1-C117D
						28	(6)	-	(22)	209								1-C47
						6	(1)	-	(5)	45								2-T33
						10	(2)	-	(8)	54								1-TC45J
						48	(12)	-	(36)	454								2-UH34D
						49	(17)	-	(32)	439								
						17	-	-	(17)	164								AUGMENT
						114	(29)	-	(85)	1059								MACS-1
						31	-	-	(31)	489								MARKSAT
						4	-	-	(4)	96								MACU-63
						35	-	-	(35)	585								TOTALS (PERSONNEL)
						1	-	-	(1)	11								MAW
						36	-	-	(36)	596								MCAS, MCALF
						53	(13)	-	(40)	442								PMF NAVY
						31	(16)	-	(15)	372								STATION NAVY
						20	(6)	-	(14)	441								YUMA BASE LOAD
						25	(21)	-	(4)	172								29 PALMS
						32	(28)	-	(4)	184								2D LAAM BN
						57	(53)	-	(4)	180								4TH LAAM BN
						10	(2)	-	(8)	54								"D" BTRY 1ST LAAM BN
						26	(6)	-	(20)	202								TOTALS (PERSONNEL)
						3	(3)	-	-	72								LAAM BN
						229	(156)	-	(73)	1841								PMF NAVY
						53	(13)	-	(40)	442								* 29 PALM BASE LOAD
						3	-	-	(3)	17								1-C47
						19	-	-	(19)	66								1-RC45J
						304	(169)	-	(135)	2366								1-TC45J
						3	(3)	-	-	22								2-UH34D
						116	(42)	(1)	(73)	629								
						26	(6)	-	(20)	202								MAG-13
						32	(8)	-	(24)	321								1-C54
						15	(5)	-	(10)	456								3-TR9J
																		MACS-13
																		MACS-13
																		VHF (AW)-212
																		VHF (AW)-232
																		VNA-214
																		HMM-161
																		MACU-62
																		MACS-2
																		AUGMENT
																		TOTALS (PERSONNEL)
																		MAW
																		MCAS, MCALF
																		PMF NAVY
																		STATION NAVY
																		KANEORE BASE LOAD
																		MCAS IWAKUNI
																		1ST MAW
																		MHHC-1
																		HHS-1
																		FOR DENT CO
																		MACS
																		MMSG-17
																		HHS-17
																		MARS-17

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OBJECTIVES					FYFS&FP (MANNING LEVEL)					TABLE OF ORGANIZATION (T.O.)					AUTH	
PERSONNEL					AIRCRAFT	NAVY					AIRCRAFT					
OFF	(NA)	(NAO)	(AG)	ENL		OFF	(NA)	(NAO)	(AG)	ENL		OFF/ENL				
						1 (1)	-	-	21						MCALF PENDLETON	
						40 (36)	-	(4)	220	65 (60)	-	(5)	220	1/3	30-UH1E	
															VMO-6	
						40 (36)	-	(4)	220	65 (60)	-	(5)	220		TOTALS (PERSONNEL)	
						1 (1)	-	-	21						MAW	
						-	-	-	2						MCALF	
						41 (37)	-	(4)	243						FMF NAVY	
															PENDLETON BASE LOAD	
					1-C117D	46 (17)	-	(29)	439					1-C117D	MCAS YUMA	
					1-C47									1-C47		
					2-T33									2-T33		
					1-TC45J									1-TC45J		
					2-UH34D									2-UH34D		
						4 (3)	-	(1)	136	4 (3)	-	(1)	136	-/3	AUGMENT	
						26 (6)	-	(20)	209	28 (6)	-	(22)	209		MACS-1	
						3 (1)	-	(2)	38	3 (1)	-	(2)	38		MARTSAT	
						10 (2)	-	(8)	54	10 (2)	-	(8)	54		MAJCU-65	
						43 (12)	-	(31)	437	45 (12)	-	(33)	437		TOTALS (PERSONNEL)	
						46 (17)	-	(29)	439						MAW	
						-	-	-	2						MCAS, MCAF	
						17	-	-	(17)	164					FMF NAVY	
															STATION NAVY	
						106 (29)	-	(77)	1042						YUMA BASE LOAD	
						35	-	-	(35)	576	36	-	-	(36)	621	29 PALMS
						4	-	-	(4)	96	4	-	-	(4)	96	2D LAAM BN
						4	-	-	(4)	89						4TH LAAM BN
						43	-	-	(43)	761						"D" BTRY 1ST LAAM BN
						1	-	-	(1)	11						TOTALS (PERSONNEL)
						44	-	-	(44)	722	40	-	-	(40)	717	LAAM BN
																FMF NAVY
																* 29 PALM BASE LOAD
						53 (13)	-	(40)	442							
														1-C47		MCAS KANEHOE BAY
														1-RC45J		
														1-TC45J		
														2-UH34D		
																MAG-13
					1-C54	32 (16)	-	(16)	371	34 (16)	-	(18)	372	3-C54		HAMS-13
					3-TF9J									3-TF9J		HAMS-13
						19 (6)	-	(13)	391	22 (6)	-	(16)	452	6/18		MAHS-13
						25 (21)	-	(4)	172	32 (26)	-	(6)	172	1/4	15-F8D	VMF(AW)-212
						25 (21)	-	(4)	172	32 (26)	-	(6)	172	1/4	15-F8D	VMF(AW)-232
						32 (28)	-	(4)	184	41 (35)	-	(6)	184	1/4	20-L4C	VMA-214
						57 (53)	-	(4)	180	65 (60)	-	(4)	180	1/3	24-UH34D	HMM-161
						10 (2)	-	(8)	54	10 (2)	-	(8)	54			MAJCU-62
						26 (6)	-	(20)	202	28 (6)	-	(22)	202	-/3		MACS-2
						3 (3)	-	-	72	3 (3)	-	-	72			AUGMENT
																TOTALS (PERSONNEL)
						229 (156)	-	(73)	1798	267 (180)	-	(87)	1860			MAW
						53 (13)	-	(40)	442							MCAS, MCAF
						3	-	-	(3)	12						FMF NAVY
						19	-	-	(19)	66						STATION NAVY
						304 (169)	-	(135)	2323							KANEHOE BASE LOAD
						1 (1)	-	-	3							MCAS IWAKUNI
																1ST MAW
						107 (42)	(1)	(64)	609	126 (42)	(1)	(83)	651	23/35		MWHG-1
						26 (6)	-	(20)	202	28 (6)	-	(22)	202	-/3		HHS-1
						33 (8)	-	(25)	319	36 (8)	-	(28)	321			FOR DENT CO
						16 (5)	-	(11)	417	20 (5)	-	(15)	492	4/17		MACS
																MMSG-17
																HHS-17
																MABS-17

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OBJECTIVES					FYFS&FP (MANNING LEVEL)					TABLE OF ORGANIZATION (T.O.)							
PERSONNEL					AIRCRAFT						NAVY		AIRCRAFT				
OFF	(NA)	(NAO)	(AG)	ENL		OFF	(NA)	(NAO)	(AG)	ENL	OFF	ENL					
				+1		1 40(36)	(1) (36)	-	(4) (4)	21 220	65(60)	-	(5) (5)	220	1/3	30-UH1E	MCALF PENDLETON VMO-6
				+1		40(36)		-	(4)	220	65(60)	-	(5)	220	1/3		TOTALS (PERSONNEL)
						1(1)		-		21							MAW
						-		-		2							MCALF
						41(37)		-	(4)	243							FME NAVY
																	PENDLETON BASE LOAD
					1-C117D	46(17)		-	(29)	439						1-C117D	MCAS YUMA
					1-C47											2-T33	
					2-T1A											1-TC45J	
					1-TC45J											2-UH34D	
					2-UH34D												
						4(3)		-	(1)	136	4(3)		-	(1)	136		AUGMENT
						25(6)		-	(19)	223	28(6)		-	(22)	223	-/3	MACS-1
						3(1)		-	(2)	38	3(1)		-	(2)	38		MARISAT
						10(2)		-	(8)	54	10(2)		-	(8)	54		MATCU-65
						42(12)		-	(30)	451	45(12)		-	(33)	451	-/3	TOTALS (PERSONNEL)
						46(17)		-	(29)	439							MAW
						-		-		2							MCAS, MCAF
						17		-	(17)	164							FME NAVY
						105(29)		-	(76)	1056							STATION NAVY
																	YUMA BASE LOAD
-	-	-	-	+9		35	-	-	(35)	612	36	-	-	(36)	621	1/11	29 PALMS
						4	-	-	(4)	96	4	-	-	(4)	96		2D LAAM BN
						4	-	-	(4)	88							4th LAAM BN
																	"D" BTRY 1ST LAAM BN
				+9		43	-	-	(43)	797	40	-	-	(40)	717	1/11	TOTALS (PERSONNEL)
						1	-	-	(1)	11							LAAM BN
						44	-	-	(44)	808							FME NAVY
																	* 29 PALM BASE LOAD
						53(13)		-	(40)	442							1-C47
																	1-RC45J
																	1-TC45J
																	2-UH34D
+1	-	-	(+1)	+6	1-C54	32(16)		-	(16)	372	34(16)		-	(18)	372		MAG-13
					3-TA4E												H&MS-13
				+1		20(6)		-	(14)	452	22(6)		-	(16)	452	6/18	MABS-13
						46(21)	(21)	(4)		273	58(26)	(26)	(6)		273	1/4	VME(AW)-212
				+1		25(21)		-	(4)	172	32(26)		-	(6)	172	1/4	VME(AW)-232
				+1		32(28)		-	(4)	184	41(35)		-	(6)	184	1/4	VMA-214
				+1		57(53)		-	(4)	180	65(60)		-	(5)	130	1/3	20-A4E
																	24-UH34D
						10(2)		-	(8)	54	10(2)		-	(8)	54		X
						25(6)		-	(19)	202	28(6)		-	(22)	202	-/3	MATCU-62
						3(3)		-		72	3(3)		-		72		MACS-2
																	AUGMENT
+1	-	-	(+1)	+10		250(156)	(21)	(73)		1961	293(180)	(26)	(87)		1961	10/36	TOTALS (PERSONNEL)
						52(13)		-	(40)	442							MAW
						3	-	-	(3)	17							MCAS, MCAF
						19	-	-	(19)	66							FME NAVY
						325(169)	(21)	(135)		2486							STATION NAVY
																	KANEHOE BASE LOAD
						1(1)		-		2							
						111(42)	(1)	(68)		651	126(42)	(1)	(83)		651		MCAS IWAKUNI
						25(6)		-	(19)	202	28(6)		-	(22)	202	-/3	1ST MAW
						34(8)		-	(26)	321	36(8)		-	(28)	321	4/17	MWHG-1
				+28		17(5)		-	(12)	464	20(5)		-	(15)	492		H&MS-1
																	FOR DENT CO
																	MACS
																	MMSG-17
																	HERS-17
																	MABS-17

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## OBJECTIVES

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## TABLE OF ORGANIZATION (T.O.)

OBJECTIVES					FYFS&P (MANNING LEVEL)					TABLE OF ORGANIZATION (T.O.)					NAVALY		AUTH		
PERSONNEL					AIRCRAFT	PERSONNEL					PERSONNEL					NAVALY		AIRCRAFT	
OFF	(NA)	(NAO)	(AG)	ENL		OFF	(NA)	(NAO)	(AG)	ENL	OFF	(NA)	(NAO)	(AG)	ENL	OFF/ENL			
				+1	15-UH1E	40	(36)	-	(4)	220	65	(60)	-	(5)	220	1/3	30-UH1E	MCALF PENDLETON VMO-6	
				-13	15-OV10A													TOTALS (PERSONNEL)	
				-12		40	(36)	-	(4)	220	65	(60)	-	(5)	220	1/3		MAW MCALF PMF NAVY	
						41	(37)	-	(4)	243								PENDLETON BASE LOAD	
					1-C117D 2-T1A 1-TC45J 2-UH14D	46	(17)	-	(29)	439							1-C117D 2-T33 1-TC45J 2-UH34D	MCAS YUMA	
						4	(3)	-	(1)	136	4	(3)	-	(1)	136	-/3		AUGMENT MACS-1 MARISAT MATCU-63	
						25	(6)	-	(19)	223	28	(6)	-	(22)	223			TOTALS (PERSONNEL)	
						3	(1)	-	(2)	38	3	(1)	-	(2)	38			MAW MCAS, MCAF PMF NAVY STATION NAVY	
						10	(2)	-	(8)	54	10	(2)	-	(8)	54		X	YUMA BASE LOAD	
						42	(12)	-	(30)	451	45	(12)	-	(33)	451	-/3		29 PALMS	
						46	(17)	-	(29)	439								2D LAAM BN 4TH LAAM BN "D" BTRY 1ST LAAM BN	
						17	-	-	(17)	164								TOTALS (PERSONNEL)	
						105	(29)	-	(76)	1056								LAAM BN PMF NAVY	
				+9		35	-	-	(35)	612	36	-	-	(36)	621	1/11		* 29 PALM BASE LOAD	
						4	-	-	(4)	96	4	-	-	(4)	96				
				+9		43	-	-	(43)	797	40	-	-	(40)	717	1/11			
						44	-	-	(44)	808									
					1-C47 1-RC45J 1-TC45J 2-UH34D	53	(13)	-	(40)	442							1-C47 1-RC45J 2-UH34D	MCAS KANEHOE BAY	
				+1	1-C54 2-TA4E	32	(16)	-	(16)	372	34	(16)	-	(18)	372		3-C54 3-TA4E	MAG-13 HMS-13	
				+70		20	(6)	-	(14)	382	22	(6)	-	(16)	452	6/18		MAES-13	
				+1		46	(21)	(21)	(4)	273	58	(26)	(26)	(6)	273	1/1	15-E4E	VHF (AW)-212	
				+1		46	(21)	(21)	(4)	273	58	(26)	(26)	(6)	273	1/1	15-E4E	VHF (AW)-232	
				+1		32	(28)	-	(4)	184	41	(35)	-	(6)	184	1/1	20-A4E	VMA-214	
				+1		57	(53)	-	(4)	180	65	(60)	-	(5)	180	1/3	24-UH34D	HMM-161	
						10	(2)	-	(8)	54	10	(2)	-	(8)	54		X	MATCU-62 MACS-2 AUGMENT	
						25	(6)	-	(19)	223	28	(6)	-	(22)	223	-/3			
						3	(3)	-	-	72	3	(3)	-	-	72				
				+1		272	(156)	(42)	(74)	2054	320	(180)	(52)	(88)	2124	10/36		TOTALS (PERSONNEL)	
						53	(13)	-	(40)	442								MAW MCAS, MCAF PMF NAVY STATION NAVY	
						3	-	-	(3)	17								KANEHOE BASE LOAD	
						19	-	-	(19)	66									
						347	(169)	(42)	(136)	2579									
						4	(3)	-	(1)	22								MCAS IWAKUNI	
				+16		109	(42)	(1)	(66)	635	126	(42)	(1)	(83)	651	23/35		IST MAW MHG-1 HMS-1 FOR DENT CO MACS MWSG-17 HMS-17 MAES-17	
						25	(6)	-	(19)	202	28	(6)	-	(22)	202	-/3			
				+75		34	(8)	-	(26)	321	36	(8)	-	(28)	321	4/17			
						17	(5)	-	(12)	417	20	(5)	-	(15)	492				





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OBJECTIVES					FYFS&FP (MANNING LEVEL)					TABLE OF ORGANIZATION (T.O.)					AUTH				
PERSONNEL					AIRCRAFT	NAVY					AIRCRAFT								
OFF	(NA)	(NAO)	(AO)	ENL		OFF	(NA)	(NAO)	(AO)	ENL		OFF/ENL							
53	(48)	-	(5)	251	16-UH1E 24-CH20A											MCALF PENDLETON VMO-6			
53	(48)	-	(5)	251												TOTALS (PERSONNEL) MAW MCALF FMF NAVY PENDLETON BASE LOAD			
					2-C4B 2-T1A 1-VTAPX 2-UH34D											MCAS YUMA			
4	(3)	-	(1)	136												AUGMENT			
28	(6)	-	(22)	223												MACS-1			
3	(1)	-	(2)	38												MARISAT			
10	(2)	-	(8)	54	X											MAICU-65			
45	(12)	-	(33)	451												TOTALS (PERSONNEL) MAW MCAS, MCAP FMF NAVY STATION NAVY YUMA BASE LOAD			
36	-	-	(36)	621												29 PALMS			
4	-	-	(4)	96												2D LAAM BN			
4	-	-	(4)	89												4th LAAM BN			
44	-	-	(44)	806												"D" BTRY 1st LAAM BN			
																TOTALS (PERSONNEL) LAAM BN FMF NAVY * 29 PALM BASE LOAD			
					1-C4B 2-VTAPX 2-UH34D											MCAS KANEONE BAY			
35	(16)	-	(19)	378	1-C130 3-TA4E											MAG-13 HMS-13			
22	(6)	-	(16)	452												MARS-13			
48	(21)	(21)	(6)	274	15-F4B											VHF(AW)-212			
48	(21)	(21)	(6)	274	15-F4B											VHF(AW)-232			
34	(28)	-	(6)	185	20-A4E											VMA-214			
58	(53)	-	(5)	182	24-CH46A											HMM-161			
1	-	-	(1)	41	6-CH53A											MAICU-62			
10	(2)	-	(8)	54	X											MACS-2			
28	(6)	-	(22)	223												AUGMENT			
3	(3)	-	-	72												TOTALS (PERSONNEL) MAW MCAS, MCAP FMF NAVY STATION NAVY KANEONE BASE LOAD			
287	(156)	(42)	(89)	2135												MCAS IWAKUNI			
																1ST MAW			
126	(42)	(1)	(83)	651												MWHG-1			
28	(6)	-	(22)	223												HMS-1			
36	(8)	-	(28)	321												FOR DENT CO			
20	(5)	-	(15)	492												MACS			
																MWSG-17			
																HMS-17			
																MBS-17			

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END FISCAL YEAR 19 72

OBJECTIVES					FYFS&FP (MANNING LEVEL)				TABLE OF ORGANIZATION (T.O.)				NAVY		AUTH	
PERSONNEL					AIRCRAFT									OFF/ENL		
OFF	(NA)	(MAO)	(AG)	ENL		OFF	(NA)	(MAO)	(AG)	ENL	OFF	(NA)	(MAO)	(AG)	ENL	OFF/ENL
					11-HLX											MCALF PENDLETON
53	(48)	-	(5)	251	5-UH1F											VMO-6
53	(48)	-	(5)	251	24-OV10A											TOTALS (PERSONNEL)
																MAW
																MCALF
																FMF NAVY
																PENDLETON BASE LOAD
					2-C&B											MCAS YUMA
					2-T1A											
					1-VTAPX											
					2-UH34D											
4	(3)	-	(1)	136												AUGMENT
28	(6)	-	(22)	223												HACS-1
3	(1)	-	(2)	38												MARISAT
10	(2)	-	(8)	54	X											MAICU-65
																TOTALS (PERSONNEL)
45	(12)	-	(33)	451												MAW
																MCAS, MCAF
																FMF NAVY
																STATION NAVY
																YUMA BASE LOAD
36	-	-	(36)	621												29 PALMS
4	-	-	(4)	96												2D LAAM BN
4	-	-	(4)	89												4TH LAAM BN
																"D" BTRY 1ST LAAM BN
44	-	-	(44)	806												TOTALS (PERSONNEL)
																LAAM BN
																FMF NAVY
																* 29 PALM BASE LOAD
					1-C&B											MCAS KANEBOHE BAY
					2-VTAPX											
					2-UH34D											
35	(16)	-	(19)	378	1-C130											MAG-13
					3-TA4B											HMS-13
22	(6)	-	(16)	452												MABS-13
48	(21)	(21)	(6)	274	15-F4B											VMP(AW)-212
48	(21)	(21)	(6)	274	15-F4B											VMP(AW)-232
34	(28)	-	(6)	286	20-A7A											VMA-214
58	(53)	-	(5)	182	24-CH46A											HMM-161
1	-	-	(1)	41	6-CH53A											MAICU-62
10	(2)	-	(8)	54	X											MACS-2
28	(6)	-	(22)	223												AUGMENT
3	(3)	-	-	72												TOTALS (PERSONNEL)
																MAW
287	(156)	(42)	(89)	2236												MCAS, MCAF
																FMF NAVY
																STATION NAVY
																KANEBOHE BASE LOAD
																MCAS IWAKUNI
																1ST MAW
																MWHG-1
126	(42)	(1)	(83)	651												HHS-1
																FOR DENI CO
28	(6)	-	(22)	223												MACS
																MWSG-17
36	(8)	-	(28)	321												HHS-17
20	(5)	-	(15)	492												MABS-17

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END FISCAL YEAR 1973

OBJECTIVES					FYFS&FP (MANNING LEVEL)					TABLE OF ORGANIZATION (T.O.)					NAVY		AUTH
PERSONNEL					AIRCRAFT											OFF/ENL	
OFF	(NA)	(NAO)	(AG)	ENL		OFF	(NA)	(NAO)	(AG)	ENL	OFF	(NA)	(NAO)	(AG)	ENL	OFF/ENL	AIRCRAFT
					16-HYX 2-0V10A											MCALF PENDLETON VMO-6	
53	(48)	-	(5)	251												TOTALS (PERSONNEL)	
53	(48)	-	(5)	251												MAW MCALF FMF NAVY	
																PENDLETON BASE LOAD	
					2-C4B 2-T1A 1-VTAPX 2-UH34D											MCAS YUMA	
4	(3)	-	(1)	136												AUGMENT	
28	(6)	-	(22)	223												MACS-1	
3	(1)	-	(2)	38												MARKSAT	
10	(2)	-	(8)	54	X											MATCU-63	
45	(12)	-	(33)	451												TOTALS (PERSONNEL)	
																MAW MCAS, MCAF FMF NAVY STATION NAVY	
																YUMA BASE LOAD	
36	-	-	(36)	621												29 PALMS	
4	-	-	(4)	96												2D LAAM BN	
4	-	-	(4)	89												4th LAAM BN	
44	-	-	(44)	806												"D" BTRY 1ST LAAM BN	
																TOTALS (PERSONNEL)	
																LAAM BN FMF NAVY	
																* 29 PALM BASE LOAD	
					1-C4B 2-VTAPX 2-UH34D											MCAS KANEHOE BAY	
35	(16)	-	(19)	378	1-C130 3-TA4E											MAG-13 H&MS-13	
22	(6)	-	(16)	452												MARS-13	
48	(21)	(21)	(6)	274	15-F4B											VMF(AW)-212	
48	(21)	(21)	(6)	274	15-F4B											VMF(AW)-232	
34	(28)	-	(6)	286	20-A7A											VMA-214	
58	(53)	-	(5)	182	26-CH46A											HMM-161	
1	-	-	(1)	41	6-CH53A											MATCU-62	
10	(2)	-	(8)	54	X											MACS-2	
28	(6)	-	(22)	223												AUGMENT	
3	(3)	-	-	72												TOTALS (PERSONNEL)	
287	(156)	(42)	(89)	2236												MAW MCAS, MCAF FMF NAVY STATION NAVY	
																KANEHOE BASE LOAD	
126	(42)	(1)	(83)	651												MCAS IWAKUNI	
28	(6)	-	(22)	223												1ST MAW	
36	(8)	-	(28)	321												MWHG-1	
20	(5)	-	(15)	492												H&MS-1	
																FOR DENT CO	
																MACS	
																MWSC-17	
																H&MS-17	
																MARS-17	

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## OBJECTIVES

**FYFS&FP  
(MANNING LEVEL)**

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OBJECTIVES					FYFS&FP (MANNING LEVEL)					TABLE OF ORGANIZATION (T.O.)					NAVY		AUTH		
PERSONNEL					AIRCRAFT														
OFF	(NA)	NAO	(AO)	ENL		OFF	(NA)	NAO	(AO)	ENL	OFF	(NA)	NAO	(AO)	ENL	OFF/ENL	AIRCRAFT		
					16-HLY 24-VULX						85	(80)	-	(3)	251		MCALF PENDLETON VMO-6		
53	(48)	-	(5)	251							85	(80)	-	(5)	251		TOTALS (PERSONNEL)		
53	(48)	-	(5)	251													MAW MCALF FMF NAVY		
																	PENDLETON BASE LOAD		
					2-C4B 2-T1A 1-VTAPX 2-UH34D												MCAS YUMA		
4	(3)	-	(1)	136							4	(3)	-	(1)	136		AUGMENT		
28	(6)	-	(22)	223							28	(6)	-	(22)	223		MACS-1		
3	(1)	-	(2)	38							3	(1)	-	(2)	38		MARTSAT		
10	(2)	-	(8)	54	X						10	(2)	-	(8)	54		MATCU-65		
45	(12)	-	(33)	451							45	(12)	-	(33)	451		TOTALS (PERSONNEL)		
																	MAW MCAS, MCAP FMF NAVY STATION NAVY		
																	YUMA BASE LOAD		
36	-	-	(36)	621							36	-	-	(36)	621		29 PALMS		
4	-	-	(4)	96							4	-	-	(4)	96		2D LAAM BN		
4	-	-	(4)	89							4	-	-	(4)	89		4th LAAM BN		
44	-	-	(44)	806							44	-	-	(44)	806		"D" BTRY 1ST LAAM BN		
																	TOTALS (PERSONNEL)		
																	LAAM BN FMF NAVY		
																	* 29 PALM BASE LOAD		
					1-C4B 2-VTAPX 2-UH34D												MCAS KANEHOE BAY		
35	(16)	-	(19)	378	1-C130 3-VTAJX						35	(16)	-	(19)	378		MAG-13		
22	(6)	-	(16)	452							22	(6)	-	(16)	452		H&MS-13		
48	(21)	(21)	(6)	286	15-F4J						58	(26)	(26)	(6)	286		MABS-13		
48	(21)	(21)	(6)	274	15-F4B						58	(26)	(26)	(6)	274		VMP(AW)-212		
34	(28)	-	(6)	286	20-A7A						41	(35)	-	(6)	286		VMP(AW)-232		
58	(53)	-	(5)	182	24-CH46A						65	(60)	-	(5)	182		VMA-214		
1	-	-	(1)	41	6-HH						1	-	-	(1)	41		FMM-161		
10	(2)	-	(8)	54	X						10	(2)	-	(8)	54		MATCU-62		
28	(6)	-	(22)	223							28	(6)	-	(22)	223		MACS-2		
3	(3)	-	-	72							3	(3)	-	-	72		AUGMENT		
37	(156)	(42)	(89)	2248							37	(180)	(52)	(89)	2248		TOTALS (PERSONNEL)		
																	MAW MCAS, MCAP FMF NAVY STATION NAVY		
																	KANEHOE BASE LOAD		
																	MCAS IWAKUNI		
																	1ST MAW		
126	(42)	(1)	(83)	651							126	(42)	(1)	(83)	651		FMHG-1		
28	(6)	-	(22)	223							28	(6)	-	(22)	223		H&MS-1		
36	(8)	-	(28)	321							36	(8)	-	(28)	321		FOR DENT CO		
20	(5)	-	(15)	492							20	(5)	-	(15)	492		MACS		
																	MMSG-17		
																	H&MS-17		
																	MABS-17		

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OBJECTIVES				FYPS&FP (MANNING LEVEL)				TABLE OF ORGANIZATION (T.O.)				AUTH	
PERSONNEL								NAVY				AIRCRAFT	
OFF	(NA)	MAO	(AO)	ENL	AIRCRAFT	OFF	(NA)	MAO	(AO)	ENL	OFF/ENL		
						14	(8)	-	(6)	204		1-C54	MCAS Iwakuni (CONT)
												3-C117	MAES-17
												4-TF9J	
												2-TC45J	
												2-UH34D	
						39	(36)	-	(3)	272		12-KC130	VMW-1
						6	(1)	-	(3)	43			VMGR-132
						10	(2)	-	(8)	54		X	MARTSAT
													MATCU-60
						31	(16)	-	(15)	316			MAG-12
												1-C117	MAES-12
												2-TF9J	MAES-12
						20	(6)	-	(14)	425			
						32	(28)	-	(4)	184		20-A4C	VMA
						32	(28)	-	(4)	184		20-A4E	VMA
						29	(16)	(8)	(3)	167		6-RF8A	VMCJ-1
												6-EF10B	
						10	(2)	-	(8)	54		X	MATCU-67
						412	(204)	(9)	(199)	3513			TOTALS (PERSONNEL)
						5	(3)	-	-	22			MAW
						5	-	-	(5)	11			MCAS, MCAF
						28	-	-	(28)	88			CIT
						34	-	-	(34)	250			PRF NAVY
													STATION NAVY
						482	(207)	(9)	(266)	3884			Iwakuni Base Load
													NAS ATSUGI
						31	(16)	-	(15)	367		1-C117	MAG-11
												2-TF9J	MAES-11
						20	(6)	-	(14)	425			MAES-11
						46	(21)	(21)	(4)	273		15-F4B	VMFA
						46	(21)	(21)	(4)	273		15-F4B	VMFA
						25	(21)	-	(4)	172		15-F8E	VMF (AW)
						10	(2)	-	(8)	54		X	MATCU-66
						26	(6)	-	(20)	202			MAES
						204	(93)	(42)	(69)	1766			TOTALS (PERSONNEL)
						7	-	-	(7)	22			MAW
													PRF NAVY
						211	(93)	(42)	(76)	1788			ATSUGI Base Load
						10	(4)	-	(6)	61		2-TC45J	MCAF FUTEMA
													MAG-16
						27	(13)	-	(14)	308		1-C117	MAES-16
						17	(5)	-	(12)	330			MAES-16
						57	(53)	-	(4)	180		24-UH34D	RMH
						57	(53)	-	(4)	180		24-UH34D	RMH
						57	(53)	-	(4)	180		24-UH34D	RMH
						26	(22)	-	(4)	142		9-UH1E	RMH-463
												9-OH43D	VMO-1
						29	(9)	-	(20)	140		✓	MASS-2
						31	-	-	(31)	489			MATCU-77
						270	(208)	-	(62)	1460			1ST LAAM ("D" BTRY)
						10	(4)	-	(6)	61			TOTALS (PERSONNEL)
						31	-	-	(31)	489			MAW
						6	-	-	(6)	11			MCAS, MCAF
						8	-	-	(8)	53			LAAM BN
													PRF NAVY
						325	(212)	-	(113)	2076			STATION NAVY
													FUTEMA Base Load
						8	(6)	-	(2)	59		1-C54	NE NORFOLK
												1-C131B	FMFLANT
												1-T1A	HQIES SQDN
												2-TC45J	
						8	(6)	-	(2)	59			TOTALS (PERSONNEL)
													HQ PRF

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OBJECTIVES				FYFS&FP (MANNING LEVEL)				TABLE OF ORGANIZATION (T.O.)				AUTH	
PERSONNEL												NAVY	
OFF (NA)	NAO(AO)	ENL	AIRCRAFT	OFF (NA)	NAO(AO)	ENL		OFF (NA)	NAO(AO)	ENL	OFF/ENL	OFF/ENL	AIRCRAFT
			3-C54	14 (8)	- (6)	202		14 (8)	- (6)	204			1-C54
			3-C117										3-C117
			3-TF9J										3-TF9J
			1-TA4E										1-TA4E
			2-TC45J										2-TC45J
			2-UR34D										2-UR34D
				39 (36)	- (3)	276		32 (48)	- (4)	276	1/3		VMW-1
				3 (1)	- (2)	38		3 (1)	- (2)	38			VMWR-152
				10 (2)	- (8)	54		10 (2)	- (8)	54			MARTSAT
													MATCU-60
			1-C117	32 (16)	- (16)	313		34 (16)	- (18)	316			MAG-12
			2-TF9J										2-TF9J
				19 (6)	- (13)	391		22 (6)	- (16)	432	6/18		MARS-12
				32 (28)	- (4)	184		41 (35)	- (6)	184	1/4		VMA
				32 (28)	- (4)	184		41 (35)	- (6)	184	1/4		VMA
				30 (17)	(8) (5)	167		39 (21)	(11) (7)	167	1/3		VMCJ-1
				10 (2)	- (8)	54		10 (2)	- (8)	54			6-RF10B
													X
				403 (205)	(9) (189)	3412		476 (235)	(12) (229)	3593			MATCU-67
				1 (1)	-	3							TOTALS (PERSONNEL)
				1	-	11							MAW
				19	-	88							MCAS, MCAF
				34	-	250							CIT
													FMR NAVY
													STATION NAVY
				472 (206)	(9) (257)	3764							INAKUNI BASE LOAD
													NAS ATSUGI
			1-C117	32 (16)	- (16)	371		34 (16)	- (18)	372			MAG-11
			2-TF9J										2-TF9J
				19 (6)	- (13)	391		22 (6)	- (16)	432	6/18		MARS-11
				46 (21)	(21) (6)	273		38 (26)	(26) (6)	273	1/4		VMFA
				46 (21)	(21) (6)	273		38 (26)	(26) (6)	273	1/4		VMFA
				25 (21)	- (6)	172		32 (26)	- (6)	172	1/4		VHF (AW)
				10 (2)	- (8)	54		10 (2)	- (8)	54			MATCU-66
				26 (6)	- (20)	202		28 (6)	- (22)	202	-/3		MARS
													TOTALS (PERSONNEL)
				204 (93)	(42) (69)	1736		242 (108)	(52) (82)	1798			MAW
				7	-	22							FMR NAVY
				211 (93)	(42) (76)	1759							ATSUGI BASE LOAD
			2-TC45J	10 (4)	- (6)	61							2-TC45J
													MCAS PUTENA
													MAG-16
			1-C117	30 (15)	- (15)	384		34 (15)	- (19)	385			1-C117
				27 (10)	- (17)	544		30 (10)	- (20)	594	4/10		MARS-16
				57 (53)	- (4)	180		65 (60)	- (5)	180	1/3		24-UR34D
				57 (53)	- (4)	180		65 (60)	- (5)	180	1/3		24-UR34D
				57 (53)	- (4)	180		65 (60)	- (5)	180	1/3		24-UR34D
				26 (22)	- (4)	142		47 (36)	- (5)	142	1/3		24-UR34D
				30 (9)	- (21)	140		33 (9)	- (24)	140	-/2		VMC-1
				10 (2)	- (8)	54		10 (2)	- (8)	54			MARS-2
				31	-	487		36	-	621	1/11		MATCU-11
				294 (217)	- (77)	1804		343 (252)	- (91)	1855			1ST LAAM ("D" BTRY)
				10 (4)	- (6)	61							TOTALS (PERSONNEL)
				31	-	487							MAW
				6	-	11							MCAS, MCAF
				8	-	55							LAAM BN
				349 (221)	- (128)	2418							FMR NAVY
													STATION NAVY
													PUTENA BASE LOAD
			1-C54										1-C54
			1-C131F										1-C131F
			2-T1A	8 (6)	- (2)	62		8 (6)	- (2)	59			2-T1A
			2-TC45J										2-TC45J
													NB NORFOLK
													FMR LANT
													HQTRS SQDN
				8 (6)	- (2)	62		8 (6)	- (2)	59			TOTALS (PERSONNEL)
													NO FMR

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OBJECTIVES					FYFS&FP (MANNING LEVEL)					TABLE OF ORGANIZATION (T.O.)								
PERSONNEL					AIRCRAFT						NAVY					AUTH		
OFF	(NA)	(NAO)	(AG)	ENL		OFF	(NA)	(NAO)	(AG)	ENL	OFF	(NA)	(NAO)	(AG)	ENL		OFF/ENL	
+1	-	-	(+1)	+6	3-C54 3-C117 4-TA4E 2-TC45J 2-UH34D	14	(8)	-	(6)	204	14	(8)	-	(6)	204		1-C54 3-C117 4-TA4E 2-TC45J 2-UH34D	MCAS Iwakuni (CONT) MARS-17
				+1		39	(36)	-	(3)	276	52	(48)	-	(4)	276	1/3	2-TC130	VMC-1 VMC-152
						3	(1)	-	(2)	38	3	(1)	-	(2)	38			MARTSAT
						10	(2)	-	(8)	54	10	(2)	-	(8)	54		X	MATCU-60
+1	-	-	(+1)	+6	1-C117 2-TA4E	32	(16)	-	(16)	316	34	(16)	-	(18)	316		1-C117 2-TA4E	MAG-12 HMS-12
				+1		20	(6)	-	(14)	452	22	(6)	-	(16)	452	6/8		MARS-12
				+1		38	(17)	(17)	(4)	254	48	(21)	(21)	(6)	254	1/4	12-A6A	VMA
				+1		32	(28)	-	(4)	187	41	(35)	-	(6)	187	1/4	20-A4E	VMA
				+1		39	(17)	(17)	(5)	198	49	(21)	(21)	(7)	198	1/4	6-RFB	VMCJ-1
						10	(2)	-	(8)	54	10	(2)	-	(8)	54		6-RFB	MATCU-67
																X		
+2	-	-	(+2)	+44		224	(94)	(35)	(195)	3668	493	(221)	(43)	(229)	3696	37/88		TOTALS (PERSONNEL)
						3	(3)	-	-	22								NAV
						5	-	-	(5)	11								MCAS, MCAF
						29	-	-	(29)	88								CIT
						34	-	-	(34)	250								FMP NAVY
						495	(97)	(35)	(363)	4039								STATION NAVY
																		Iwakuni Base Load
																		NAS Atsugi
+1	-	-	(+1)	+6	1-C117 2-TA4E	32	(16)	-	(16)	372	34	(16)	-	(18)	372		1-C117 2-TA4E	MAG-11 HMS-11
				+1		20	(6)	-	(14)	452	22	(6)	-	(16)	452	6/8		MARS-11
				+1		46	(21)	(21)	(4)	273	58	(26)	(26)	(6)	273	1/4	15-RFB	VMA
				+1		46	(21)	(21)	(4)	273	58	(26)	(26)	(6)	273	1/4	15-RFB	VMA
				+1		46	(21)	(21)	(4)	273	58	(26)	(26)	(6)	273	1/4	15-RFB	VMA (AW)
						10	(2)	-	(8)	54	10	(2)	-	(8)	54		X	MATCU-66
						25	(6)	-	(19)	202	28	(6)	-	(22)	202	-/3		MARS
+1	-	-	(+1)	+9		225	(93)	(63)	(69)	1899	268	(108)	(78)	(82)	1899	9/33		TOTALS (PERSONNEL)
						7	-	-	(7)	22								NAV
						232	(93)	(63)	(76)	1921								FMP NAVY
																		ATSUGI Base Load
					2-TC45J	10	(4)	-	(6)	61							4-TC45J	MCAF Futema
+1	-	-	(+1)	+6	1-C117	32	(15)	-	(17)	385	34	(15)	-	(19)	385		1-C117	MAG-16
				+25		28	(10)	-	(18)	569	30	(10)	-	(20)	594	4/10		MARS-16
				+1		57	(53)	-	(4)	181	65	(60)	-	(5)	181	1/3	2-CH46A	HMM
				+1		57	(53)	-	(4)	181	65	(60)	-	(5)	181	1/3	2-CH46A	HMM
				+1		57	(53)	-	(4)	181	65	(60)	-	(5)	181	1/3	2-UH34D	HMM
				+1		26	(22)	-	(4)	142	41	(36)	-	(5)	142	1/3	18-UH1E	HMM-463
						30	(9)	-	(21)	140	33	(9)	-	(24)	140	-/2		VMO-1
						10	(2)	-	(8)	54	10	(2)	-	(8)	54		X	MARS-2
				+9		31	-	-	(31)	523	35	-	-	(36)	621	1/11		MATCU-77
																		1ST LAAM ("D" BTRY)
+1	-	-	(+1)	+35		297	(217)	-	(80)	1832	343	(252)	-	(91)	1857	8/24		TOTALS (PERSONNEL)
						10	(4)	-	(6)	61								NAV
						31	-	-	(31)	523								MCAS, MCAF
						6	-	-	(6)	11								LAAM BN
						8	-	-	(8)	55								FMP NAVY
						352	(221)	-	(131)	2482								STATION NAVY
																		Futema Base Load
					1-C54 1-C131F 2-T1A 2-TC45J	8	(6)	-	(2)	62	8	(6)	-	(2)	59		1-C54 1-C131F 1-T1A 2-TC45J	NE NORFOLK FMP NAVY HJTRS SQDN
						8	(6)	-	(2)	62	8	(6)	-	(2)	59			TOTALS (PERSONNEL)
																		HQ FMP

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OBJECTIVES					FYFS&FP (MANNING LEVEL)					TABLE OF ORGANIZATION (T.O.)					AUTH			
PERSONNEL					AIRCRAFT						NAVY					AIRCRAFT		
OFF	(NA)	(NAO)	(AG)	ENL		OFF	(NA)	(NAO)	(AG)	ENL	OFF	(NA)	(NAO)	(AG)	ENL		OFF/ENL	
+1	-	-	(+1)	+6	1-TC45J 2-C117 2-C130 4-TA4E 1-VTAPX 2-UH34D	14	(8)	-	(6)	204	14	(8)	-	(6)	204	2-C117 4-TA4E 2-UH34D	MCAS IWAKUNI (CONT) MABS-17	
+6	-	-	(+6)	+31	14-KC130	39	(36)	-	(3)	276	52	(48)	-	(4)	276	1/3	12-KC130	VWV-1 VMGR-152 MARTSAT MATCU-60 MAG-12 MABS-12
						3	(1)	-	(2)	38	3	(1)	-	(2)	38		X	MABS-12 VMA VMA VMEJ-1
						10	(2)	-	(8)	54	10	(2)	-	(8)	54		X	MATCU-67
+1	-	-	(+1)	+6	1-C117 2-TA4E	32	(16)	-	(16)	316	34	(16)	-	(18)	316	1-C117 2-TA4E	12-AGA 2D-A4E 2-BE4B 2-EF10B	TOTALS (PERSONNEL) MAW MCAS, MCAF CIT FMF NAVY STATION NAVY IWAKUNI BASE LOAD
				+70		20	(6)	-	(14)	382	22	(6)	-	(16)	452	6/18		NAS ATSUGI MAG-11 MABS-11
				+1		38	(17)	(17)	(4)	254	48	(21)	(21)	(6)	254	1/4	15-FLJ 15-F4B 15-F4B	MABS-11 VMPA VMPA VME (AW)
				+1		32	(28)	-	(4)	184	41	(35)	-	(6)	184	1/4	X	MATCU-66 MACS
				+1		39	(17)	(17)	(5)	198	49	(21)	(21)	(7)	198	1/4		TOTALS (PERSONNEL) MAW FMF NAVY ATSUGI BASE LOAD
						10	(2)	-	(8)	54	10	(2)	-	(8)	54			
+8	-	-	(+8)	+207		422	(194)	(35)	(193)	3535	493	(221)	(43)	(229)	3696	37/88		
						4	(3)	-	(1)	22								
						5	-	-	(5)	44								
						37	-	-	(37)	122								
						34	-	-	(34)	250								
						502	(197)	(35)	(270)	3940								
+1	-	-	(+1)	+6	1-C117 2-TA4E	32	(16)	-	(16)	372	34	(16)	-	(18)	372	1-C117 2-TA4E	15-FLJ 15-F4B 15-F4B	MABS-11 VMPA VMPA VME (AW)
				+70		20	(6)	-	(14)	382	22	(6)	-	(16)	452	6/18	X	MATCU-66 MACS
				+1		46	(21)	(21)	(4)	285	58	(26)	(26)	(6)	285	1/4		
				+1		46	(21)	(21)	(4)	273	58	(26)	(26)	(6)	273	1/4		
				+1		46	(21)	(21)	(4)	273	58	(26)	(26)	(6)	273	1/4		
				+1		10	(2)	-	(8)	54	10	(2)	-	(8)	54			
						25	(6)	-	(19)	223	28	(6)	-	(22)	223	-/3		
+1	-	-	(+1)	+79		225	(93)	(63)	(69)	1862	268	(108)	(78)	(82)	1932	9/33		
						7	-	-	(7)	22								
						232	(93)	(63)	(76)	1884								
					2-TC45J	10	(4)	-	(6)	61								
+1	-	-	(+1)	+6	1-C117	30	(15)	-	(15)	385	34	(15)	-	(19)	385	1-C117	4-TC45J MAG-16	MCAS, MCAF MABS-16 MABS-16
				+50		27	(10)	-	(17)	544	30	(10)	-	(20)	594	4/10	2-CH46A 2-CH46A 2-CH46A 2-CH46A	FMF FMF FMF FMF
				+1		57	(53)	-	(4)	181	62	(60)	-	(5)	181	1/3	12-CH46A 12-CH46A 12-CH46A	FMF-463 VMO-1
				+1		57	(53)	-	(4)	181	65	(60)	-	(5)	181	1/3		
				+1		57	(53)	-	(4)	181	65	(60)	-	(5)	181	1/3		
				+1		33	(29)	-	(4)	152	35	(30)	-	(5)	152	1/3		
				+1		26	(22)	-	(4)	142	41	(36)	-	(5)	142	1/3		
						30	(9)	-	(21)	140	33	(9)	-	(24)	140	-/2		
						10	(2)	-	(8)	54	10	(2)	-	(8)	54		X	MASS-2 MATCU-77
				+9		31	-	-	(31)	523	36	-	-	(36)	621	1/11		1ST LAAM ("D" BTRY)
+1	-	-	(+1)	+61		327	(246)	-	(81)	1960	378	(282)	-	(96)	2010	9/27		TOTALS (PERSONNEL) MAW MCAS, MCAF LAAM BN FMF NAVY STATION NAVY FUTEMA BASE LOAD
				+9		10	(4)	-	(6)	61								
						31	-	-	(31)	523								
						6	-	-	(6)	11								
						8	-	-	(8)	22								
						382	(250)	-	(122)	2610								
					1-C54 1-C131F 1-T1A 1-T39 1-TC45J 1-VTAPX	8	(6)	-	(2)	59								NE NORFOLK FMFLANT HQTRS SQDN
				+15		8	(6)	-	(2)	59								TOTALS (PERSONNEL) HQ FMF

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END FISCAL YEAR 1969

OBJECTIVES					FYFS&FP (MANNING LEVEL)					TABLE OF ORGANIZATION (T.O.)					NAVY		AUTH	
PERSONNEL															OFF/ENL		AIRCRAFT	
OFF	(NA)	(NAO)	(AO)	ENL	AIRCRAFT	OFF	(NA)	(NAO)	(AO)	ENL	OFF	(NA)	(NAO)	(AO)	ENL	OFF/ENL	AIRCRAFT	
#1	-	-	(#1)	#6	2-C117 2-C130 2-TA4E 2-VTAPE 2-UR32D	14	(8)	-	(6)	204	14	(8)	-	(6)	204		1-C54 2-C117 2-TA4E 2-UR32D	MCAS Iwakuni (CONT) HABS-17
#18 (#18)	-	-		#125	18-KC130	39	(36)	-	(3)	276	52	(48)	-	(4)	276	1/3	12-KC130	VFW-4 VHGR-152 MARTSAT MATCU-60 MAG-12
						3	(1)	-	(2)	38	3	(1)	-	(2)	38			
						10	(2)	-	(8)	54	10	(2)	-	(8)	54		X	
#1	-	-	(#1)	#6	1-C117 2-TA4E	32	(16)	-	(16)	316	34	(16)	-	(18)	316		1-C117 2-TA4E	HABS-12
				#53		20	(6)	-	(14)	399	22	(6)	-	(16)	452	6/18		HABS-12
#16 (#8) (#8)	-	-		#59	15-A6A	38	(17)	(17)	(4)	254	48	(21)	(21)	(6)	254	1/4	12-A6A	VMA
						32	(28)	-	(4)	285	41	(35)	-	(6)	285	1/4	20-A7A	VMA
				#1	6-RE4B 6-FA6B	31	(13)	(13)	(5)	198	49	(21)	(21)	(7)	198	1/4	6-RE4B 3-RE10B	VMCJ-1
+9	(+4)	(+4)	(+1)	#120		10	(2)	-	(8)	54	10	(2)	-	(8)	54		X	MATCU-67
+45 (+30) (+12) (+3)				#26		42	(190)	(31)	(191)	3709	499	(221)	(43)	(229)	3818	37/88		TOTALS (PERSONNEL)
						4	(3)	-	(1)	22								MAW
						5	-	-	(5)	11								MCAS, MCAF
						37	-	-	(37)	122								CIT
						34	-	-	(34)	250								FMF NAVY
						402	(193)	(31)	(268)	4114								STATION NAVY
																		Iwakuni Base Load
																		NAS Atsugi
#1	-	-	(#1)	#6	1-C117 2-TA4E	32	(16)	-	(16)	372	34	(16)	-	(18)	372		1-C117 2-TA4E	MAG-11
				#53		20	(6)	-	(14)	399	22	(6)	-	(16)	452	6/18		HABS-11
				#1		46	(21)	(21)	(4)	285	58	(26)	(26)	(6)	285	1/4	15-F4J	HABS-11
				#1		46	(21)	(21)	(4)	273	58	(26)	(26)	(6)	273	1/4	15-F4B	VHFA
				#1		46	(21)	(21)	(4)	273	58	(26)	(26)	(6)	273	1/4	15-F4B	VHFA
				#1		10	(2)	-	(8)	54	10	(2)	-	(8)	54		X	VHF (AW)
						25	(6)	-	(19)	223	28	(6)	-	(22)	223	-/3		MATCU-66
																		MACS
																		TOTALS (PERSONNEL)
#1	-	-	(#1)	#62		225	(93)	(63)	(69)	1879	268	(108)	(78)	(82)	1932	9/33		MAW
						7	-	-	(7)	22								FMF NAVY
						232	(93)	(63)	(76)	1901								ATSUGI Base Load
					2-TG45J	10	(4)	-	(6)	61							4-TG45J	MCAF Futema
#1	-	-	(#1)	#6	1-C117	30	(15)	-	(15)	385	34	(15)	-	(19)	385		1-C117	MAG-16
				#59		27	(10)	-	(17)	555	30	(10)	-	(20)	554	4/10		HABS-16
				#1		57	(53)	-	(4)	181	65	(60)	-	(5)	181	1/3	21-CH46A	HABS-16
				#1		57	(53)	-	(4)	181	65	(60)	-	(5)	181	1/3	21-CH46A	HMM
				#1		57	(53)	-	(4)	181	65	(60)	-	(5)	181	1/3	21-CH46A	HMM
				#1		33	(29)	-	(4)	152	35	(30)	-	(5)	152	1/3	12-CH53A	HMM-463
				#1	8-UH1E	26	(22)	-	(4)	142	41	(36)	-	(5)	142	1/3	18-UH1E	VMO-1
#2 (#2)	-	-		#1	12-OV10A	30	(9)	-	(21)	140	33	(9)	-	(24)	140	-/2		MASS-2
						10	(2)	-	(8)	54	10	(2)	-	(8)	54		X	MATCU-77
				#9		31	-	-	(31)	523	36	-	-	(36)	621	1/11		1ST LAAM (ND) BTRY
#3 (#2)	-	-	(#1)	#51		327	(246)	-	(81)	1971	378	(282)	-	(96)	2010	9/27		TOTALS (PERSONNEL)
						10	(4)	-	(6)	61								MAW
						31	-	-	(31)	523								MCAS, MCAF
						6	-	-	(6)	11								LAAM BN
						8	-	-	(8)	55								FMF NAVY
						382	(250)	-	(132)	2621								STATION NAVY
																		Futema Base Load
					1-C54 1-C131F 2-T39 1-VTAPE	8	(6)	-	(2)	59							1-C131F 1-T1A	NB NORFOLK FMFLANT HqTRS SQDN
						8	(6)	-	(2)	59								TOTALS (PERSONNEL)
																		HQ FMF

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OBJECTIVES				FYFS&FP (MANNING LEVEL)				TABLE OF ORGANIZATION (T.O.)				NAVY		AUTH	
PERSONNEL				AIRCRAFT				OFF (NA) (NAO) (AO) ENL				OFF/ENL		AIRCRAFT	
15	(8)	-	(7)	210	3-C130										MCAS IWAKUNI (CONT)
					4-TA4E										BASE-17
					2-VTAP(X)										
					2-UH34D										
56	(25)	(25)	(6)	246	9-E2A										VMW-1
58	(54)	-	(4)	401	18-KC130										VMGR-152
3	(1)	-	(2)	38											MARTSAT
10	(2)	-	(8)	54	X										MATCU-60
35	(16)	-	(19)	322	1-C130										MAG-12
					2-TA4E										WMS-12
22	(6)	-	(16)	452											MABS-12
48	(21)	(21)	(6)	313	15-A6A										VMA
34	(28)	-	(6)	286	20-A7A										VMA
41	(17)	(17)	(7)	319	6-BF4E										VMCJ-1
					6-FA6B										
10	(2)	-	(8)	54	X										MATCU-67
542	(241)	(64)	(237)	4382											TOTALS (PERSONNEL)
															MAW
															MCAS, MCAF
															CYT
															FHF NAVY
															STATION NAVY
															IWAKUNI BASE LOAD
															NAS ATSUGI
35	(16)	-	(19)	378	1-C130										MAG-11
					2-TA4E										WMS-11
22	(6)	-	(16)	452											MABS-11
48	(21)	(21)	(6)	286	15-F4J										VMFA
48	(21)	(21)	(6)	274	15-F4B										VMFA
48	(21)	(21)	(6)	274	15-F4B										VMP (AW)
10	(2)	-	(8)	54	X										MATCU-66
28	(6)	-	(22)	223											MACS
															TOTALS (PERSONNEL)
239	(93)	(63)	(83)	1941											MAW
															FHF NAVY
															ATSUGI BASE LOAD
					2-VTAPX										MCAF FUTEMA
35	(15)	-	(20)	391	1-C130										MAG-16
30	(10)	-	(20)	594											WMS-16
58	(53)	-	(5)	1822	24-CH46A										MABS-16
58	(53)	-	(5)	182	24-CH46A										HMM
58	(53)	-	(5)	182	24-CH46A										HMM
34	(29)	-	(5)	153	12-CH53A										HMM
29	(24)	-	(5)	144	8-UH1H										HMH-463
					2-OV10A										VMO-1
33	(9)	-	(24)	140											MASS-2
10	(2)	-	(8)	54	X										MATCU-77
31	-	-	(31)	532											1ST LAAM ("D" BTRY)
345	(248)	-	(97)	2022											TOTALS (PERSONNEL)
31	-	-	(31)	532											MAW
															MCAS, MCAF
															LAAM BN
															FHF NAVY
															STATION NAVY
															FUTEMA BASE LOAD
															NE NORFOLK
					1-C54										FMFLANT
					1-C131F										HQTRS SQDN
					3-T33										
					1-VTAPX										
															TOTALS (PERSONNEL)
															HQ FHF

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END FISCAL YEAR 1972

OBJECTIVES					FYFS&FP (MANNING LEVEL)					TABLE OF ORGANIZATION (T.O.)					NAVY		AUTH	
PERSONNEL					AIRCRAFT	FYFS&FP (MANNING LEVEL)					TABLE OF ORGANIZATION (T.O.)					NAVY		AIRCRAFT
OFF	(NA)	(MAO)	(AO)	ENL		OFF	(NA)	(MAO)	(AO)	ENL	OFF	(NA)	(MAO)	(AO)	ENL	OFF/ENL		
15	(8)	-	(7)	210	3-C130 4-TA4E 2-VMAF(X) 2-VH34D												MCAS Iwakuni (CONT)	
56	(25)	(25)	(6)	246	9-E2A												VMA-1	
58	(34)	-	(4)	401	18-VG(2)												VMA-152	
3	(1)	-	(2)	38													MARTSAT	
10	(2)	-	(8)	54	X												MATCU-60	
35	(16)	-	(19)	322	1-C130 2-TA4E												MAG-12	
22	(6)	-	(16)	452													MCMS-12	
48	(21)	(21)	(6)	313	15-A6A												MABS-12	
34	(28)	-	(6)	286	20-A7A												VMA	
41	(17)	(17)	(7)	319	6-BFAB												VMA	
10	(2)	-	(8)	54	6-BA6B X												VMAJ-1	
342	(241)	(64)	(237)	4382													MATCU-67	
																	TOTALS (PERSONNEL)	
																	MAW	
																	MCAS, MCAF	
																	CIT	
																	FNF NAVY	
																	STATION NAVY	
																	Iwakuni BASE LOAD	
																	NAS ATSUGI	
35	(16)	-	(19)	378	1-C130 2-TA4E												MAG-11	
22	(6)	-	(16)	452													MCMS-11	
48	(21)	(21)	(6)	286	15-F4J												MABS-11	
48	(21)	(21)	(6)	274	15-F4B												VMA	
48	(21)	(21)	(6)	274	15-F4B												VMA	
10	(2)	-	(8)	54	X												VMA (AW)	
28	(6)	-	(22)	223													MATCU-66	
																	MACS	
239	(93)	(63)	(83)	1941													TOTALS (PERSONNEL)	
																	MAW	
																	FNF NAVY	
																	ATSUGI BASE LOAD	
					2-VTAPX												MCAF FUTENA	
35	(15)	-	(20)	391	1-C130												MAG-16	
30	(10)	-	(20)	594													MCMS-16	
58	(53)	-	(5)	182	24-CH46A												MABS-16	
58	(53)	-	(5)	182	24-CH46A												HMM	
58	(53)	-	(5)	182	24-CH46A												HMM	
58	(53)	-	(5)	182	24-CH46A												HMM	
34	(23)	-	(5)	153	12-CH43A												HMM-463	
29	(24)	-	(5)	144	8-UH1B 12-OV10A												VMO-1	
33	(9)	-	(24)	140													MASS-2	
10	(2)	-	(8)	54	X												MATCU-77	
31	-	-	(31)	532													1ST LAAM ("D" BTRY)	
345	(248)	-	(97)	2022													TOTALS (PERSONNEL)	
31	-	-	(31)	532													MAW	
																	MCAS, MCAF	
																	LAAM BN	
																	FNF NAVY	
																	STATION NAVY	
																	FUTENA BASE LOAD	
																	NB NORFOLK	
					1-C131F												FRPLANT	
					1-C4B												MCIRS SQDN	
					2-F39													
					1-VTAPX													
																	TOTALS (PERSONNEL)	
																	HQ FNF	

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OBJECTIVES					FYFS&FP (MANNING LEVEL)					TABLE OF ORGANIZATION (T.O.)					AUTH		
PERSONNEL					AIRCRAFT						NAVY					AIRCRAFT	
OFF	(NA)	(NAO)	(AO)	ENL		OFF	(NA)	(NAO)	(AO)	ENL	OFF	(NA)	(NAO)	(AO)	ENL		OFF/ENL
15	(8)	-	(7)	210	3-C130 2-VTAPX 2-VTAPX 2-UH34D												MCAS Iwakuni (CONT) HMS-17
56	(25)	(25)	(6)	246	9-F2A												VW-4 VMGR-152
58	(54)	-	(4)	401	18-VGX												MARTSAT MATCU-60
3	(1)	-	(2)	38													MAG-12 HMS-12
10	(2)	-	(8)	54													HMS-12
35	(16)	-	(19)	322	1-C130 2-TA4E												HMS-12
22	(6)	-	(16)	452													VMA
48	(21)	(21)	(6)	313	15-A6A												VMA
34	(28)	-	(8)	286	20-A7A												VMA
41	(17)	(17)	(7)	319	6-FA6B												VMA
10	(2)	-	(8)	54	X												VMA
542	(241)	(64)	(237)	4382													VMA
																	VMA
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END FISCAL YEAR 1974

OBJECTIVES					FYPS&FP (MANNING LEVEL)					TABLE OF ORGANIZATION (T.O.)					NAVY		AUTH		
PERSONNEL					AIRCRAFT													AIRCRAFT	
OFF	(NA)	(NAO)	(AO)	ENL		OFF	(NA)	(NAO)	(AO)	ENL	OFF	(NA)	(NAO)	(AO)	ENL	OFF/ENL			
15	(8)	-	(7)	210	3-C130 1-VTAJX 2-VTAPX 2-0H340													MCAS IWAKUNI (CONT)	
56	(25)	(25)	(6)	246	9-E2A													VW-4	
58	(54)	-	(4)	401	18VGR													VHGR-152	
3	(1)	-	(2)	38														MARTSAT	
10	(2)	-	(8)	54														MATCU-60	
35	(16)	-	(19)	322	1-C130 3-VTAJX													MAG-12	
22	(6)	-	(16)	452														WMS-12	
48	(21)	(21)	(6)	313	15-A6A													MARS-12	
34	(28)	-	(6)	286	20-A7A													VMA	
44	(17)	(17)	(4)	319	6-VF2X 6-RA6B													VHCF-1	
10	(2)	-	(8)	54	X													MATCU-67	
542	(241)	(66)	(237)	4382														TOTALS (PERSONNEL)	
																		MAW	
																		MCAS, MCAF	
																		CIT	
																		FMF NAVY	
																		STATION NAVY	
																		IWAKUNI BASE LOAD	
																		NAS ATSUGI	
35	(16)	-	(19)	378	1-C130 2-VTAJX													MAG-11	
22	(6)	-	(16)	452														WMS-11	
48	(21)	(21)	(6)	286	15-E2A													MARS-11	
48	(21)	(21)	(6)	286	15-E2A													VHFA	
48	(21)	(21)	(6)	304	15-VF-FA													VHFA	
10	(2)	-	(8)	54	X													VHFA (AW)	
28	(6)	-	(42)	223														MATCU-66	
																		MARS	
239	(93)	(63)	(83)	1983														TOTALS (PERSONNEL)	
																		MAW	
																		FMF NAVY	
																		ATSUGI BASE LOAD	
					2-VTAPX													MCAF FUEMA	
35	(15)	-	(20)	391	1-C130													MAG-16	
30	(10)	-	(20)	594														BMH-16	
58	(53)	-	(5)	182	21-HMX													MARS-16	
58	(53)	-	(5)	182	21-HMX													BMH	
58	(53)	-	(5)	182	24-0H46A													BMH	
34	(29)	-	(5)	153	12-HBY													BMH	
29	(24)	-	(5)	144	8-HMX													BMH-463	
					10-0V10A													VMO-1	
33	(9)	-	(24)	140														MASS-2	
10	(2)	-	(8)	54	X													MATCU-77	
31	-	-	(31)	532														1ST LAAM ("D" BTRY)	
245	(248)	-	(97)	2022														TOTALS (PERSONNEL)	
31	-	-	(31)	532														MAW	
																		MCAS, MCAF	
																		LAAM BN	
																		FMF NAVY	
																		STATION NAVY	
																		FUEMA BASE LOAD	
					2-C4B													NE NORFOLK	
					2-F39													PREPLANT	
					1-VTAPX													HQTRS SQDN	
																		TOTALS (PERSONNEL)	
																		HQ FMF	

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OBJECTIVES				FYFS&FP (MANNING LEVEL)				TABLE OF ORGANIZATION (T.O.)				NAUT			
PERSONNEL				AIRCRAFT				NAUT				AIRCRAFT			
OFF	(NA)	(NAO)	(AG)	ENL	OFF	(NA)	(NAO)	(AG)	ENL	OFF	(NA)	(NAO)	(AG)	ENL	OFF/ENL
					112	(34)	(1)	(77)	846						1-C54
															1-C119B
															1-C117D
															1-U11A
															6-T33
															1-TC45J
															2-UH34B
					37	(31)	-	(6)	173						22-TF9J
															2D MAW
															VMT-1
															MWHG-2
					115	(42)	(1)	(72)	629						HAMS-2
					29	(9)	-	(20)	140						MASS-1
					26	(6)	-	(20)	202						MACE
					31	-	-	(31)	489						3D LAAM BN
															FOR DENT CO
					10	(9)	(1)	-	4						NATOPS
															MMSG-27
					32	(8)	-	(24)	321						HAMS-27
					16	(5)	-	(11)	456						MASS-27
					14	(8)	-	(6)	204						HAMS-27
															2-C54
															3-C117
															4-T1A
															2-A1E
					39	(36)	-	(3)	276						12-KC130
					6	(1)	-	(5)	45						VMW-2
															VMGR-252
															MARTSAT
					32	(16)	-	(16)	372						MAG-14
															HAMS-14
					21	(6)	-	(15)	396						MASS-14
					46	(21)	(21)	(4)	254						VMA(AW)
					32	(28)	-	(4)	184						20-A4C
					32	(28)	-	(4)	184						VMA
					10	(2)	-	(8)	54						20-A4E
															X
					32	(16)	-	(16)	372						1-C117
															3-T1A
					21	(6)	-	(15)	396						15-Y4B
					46	(21)	(21)	(4)	273						15-Y4B
					46	(21)	(21)	(4)	273						20-A4C
					32	(28)	-	(4)	184						9-B7BA
															9-EA6A
					44	(26)	(13)	(5)	259						TOTALS (PERSONNEL)
					681	(343)	(78)	(260)	228						MAW
					31	-	-	(31)	489						LAAM BN
					37	(31)	-	(4)	173						HO FMP
					112	(34)	(1)	(77)	846						MCAS, MCAF
					5	-	-	(5)	11						CIT
					31	-	-	(31)	78						FMP NAVY
					40	-	-	(40)	120						STATION NAVY
					937	(408)	(79)	(450)	719						CHERRY POINT BASE LOAD
					27	(11)	-	(16)	259						2-TC45J
															3-T28
					29	(14)	-	(15)	374						MAG-26
					18	(5)	-	(13)	337						HAMS-26
					57	(53)	-	(4)	181						MASS-26
					57	(53)	-	(4)	180						24-CH46
					57	(53)	-	(4)	180						24-UH34I
					57	(53)	-	(4)	180						24-UH34I
					57	(53)	-	(4)	180						24-UH34I
					57	(53)	-	(4)	180						24-UH34I
					33	(29)	-	(4)	152						12-CH370
															HMM-461
					33	(29)	-	(4)	181						14-UH1A
					26	(6)	-	(20)	202						10-01C
					10	(2)	-	(8)	54						X
															MACE
															MATCH-64
															MATCH-78
					434	(250)	-	(84)	2201						TOTALS (PERSONNEL)
					27	(11)	-	(16)	259						MAW
					8	-	-	(8)	14						MCAS, MCAF
					7	-	-	(7)	15						FMP NAVY
					476	(361)	-	(115)	2489						STATION NAVY
															NEW RIVER STATION LOAD

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OBJECTIVES				FYF&P (MANNING LEVEL)				TABLE OF ORGANIZATION (T.O.)				AUTH		
PERSONNEL				AIRCRAFT					NAVY				AIRCRAFT	
OFF	(NA)	(NAO)	(AO)		ENL	OFF	(NA)	(NAO)	(AO)	ENL	OFF/ENL			
				1-C54	112 (34)	(1)	(77)	846					1-C54	MCAS CHERRY POINT
				1-C119F									1-C119F	
				1-C117D									1-C117D	
				1-U11A									1-U11A	
				2-T1A									2-T33	
				1-TC45J									1-TC45J	
				2-UH2B									2-UH34D	
					40 (34)	-	(6)	244	41 (35)	-	(6)	244	21-TP9J	2D NAW
													1-TA4E	VMT-1
					106 (42)	(1)	(63)	609	126 (42)	(1)	(83)	651	11/18	MWRG-2
					30 (9)	-	(21)	140	33 (9)	-	(24)	140	-/2	H&HS-2
					26 (6)	-	(20)	202	28 (6)	-	(22)	202	-/3	MASS-1
					35 -	-	(35)	576	36 -	-	(36)	621	1/11	MACS
													23/35	3D LAAM BN
					10 (9)	(1)	-	4	10 (9)	(1)	-	4		FOR DENT CO
					33 (8)	-	(25)	319	36 (8)	-	(28)	321		NATOPS
					16 (5)	-	(11)	417	20 (5)	-	(15)	492	4/17	MMSG-27
				2-C54	14 (8)	-	(6)	202	14 (8)	-	(6)	204		H&HS-27
				4-C117										MASS-27
				4-T1A										MASS-27
					39 (36)	-	(3)	276	52 (48)	-	(4)	276	1/3	2-C54
					3 (1)	-	(2)	38	3 (1)	-	(2)	38		3-C117
														4-T1A
														2-A1E
														2-KC130
				1-C117	32 (16)	-	(16)	371	34 (16)	-	(18)	372		VMW-2
				3-T1A										VMGR-252
					19 (6)	-	(13)	362	22 (6)	-	(16)	452	6/18	MARISAT
					38 (17)	(17)	(4)	254	48 (21)	(21)	(6)	254	1/4	MAG-14
					38 (17)	(17)	(4)	254	48 (21)	(21)	(6)	254	1/4	H&HS-14
					32 (28)	-	(4)	184	41 (35)	-	(6)	184	1/4	MASS-14
					10 (2)	-	(8)	54	10 (2)	-	(8)	54		VMA(AW)
														VMA
														20-A4E
														X
														MATCU-81
				1-C117	32 (16)	-	(16)	371	34 (16)	-	(18)	372		MAG-24
				3-T1A										H&HS-24
					19 (6)	-	(13)	362	22 (6)	-	(16)	452	6/18	MASS-24
					46 (21)	(21)	(4)	273	58 (26)	(26)	(6)	273	1/4	15-F4B
					46 (21)	(21)	(4)	273	58 (26)	(26)	(6)	273	1/4	15-F4B
					38 (17)	(17)	(4)	254	48 (21)	(21)	(6)	254	1/4	12-A6A
					10 (2)	-	(8)	54	10 (2)	-	(8)	54		VMA
					47 (25)	(17)	(5)	390	71 (32)	(32)	(7)	390	1/4	9-FA6A
														6-FA6A
														6-RF4B
														6-RF8A
					584 (310)	(112)	(254)	5663	826 (366)	(149)	(311)	5966		TOTALS (PERSONNEL)
					35 -	-	(35)	576						MAW
					40 (34)	-	(6)	244						LAAM BN
					112 (34)	(1)	(77)	846						HO FMF
					5 -	-	(5)	11						MCAS, MCAP
					31 -	-	(31)	78						CIT
					40 -	-	(40)	120						FMF NAVY
														STATION NAVY
					547 (386)	(113)	(448)	7538						CHERRY POINT BASE LOAD
				2-TC45J	27 (11)	-	(16)	259					2-TC45J	MCAP NEW RIVER
				3-T2B									3-T2B	
				1-C117	32 (16)	-	(16)	446	36 (16)	-	(20)	447	1-C117	MAG-26
					27 (10)	-	(17)	544	30 (10)	-	(20)	594	4/10	H&HS-26
					52 (53)	-	(4)	181	65 (60)	-	(5)	181	1/3	24-CH46A
					52 (53)	-	(4)	180	65 (60)	-	(5)	180	1/3	24-UH34D
					52 (53)	-	(4)	180	65 (60)	-	(5)	180	1/3	24-UH34D
					52 (53)	-	(4)	180	65 (60)	-	(5)	180	1/3	24-UH34D
					52 (53)	-	(4)	180	65 (60)	-	(5)	180	1/3	24-UH34D
					33 (29)	-	(4)	152	35 (30)	-	(5)	152	1/3	24-UH34D
														24-CH37C
					33 (29)	-	(4)	179	53 (48)	-	(5)	179	1/3	24-UH1E
					26 (6)	-	(20)	202	28 (6)	-	(22)	202	-/3	MACS
					10 (2)	-	(8)	54	10 (2)	-	(8)	54		X
					10 (2)	-	(8)	54	10 (2)	-	(8)	54		X
														TOTALS (PERSONNEL)
					456 (359)	-	(97)	2532	527 (414)	-	(113)	2583		MAW
					27 (11)	-	(16)	259						MCAS, MCAP
					8 -	-	(8)	14						FMF NAVY
					7 -	-	(7)	15						STATION NAVY
					598 (370)	-	(128)	2820						NEW RIVER STATION LOAD

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## OBJECTIVES

**FYFS&FP  
(MANNING LEVEL)**

**TABLE OF ORGANIZATION  
(T.O.)**

NAVY

## ADTM

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OBJECTIVES					FYFS&FP (MANNING LEVEL)					TABLE OF ORGANIZATION (T.O.)					NAVY		AUTH		
PERSONNEL					AIRCRAFT											OFF/ENL		AIRCRAFT	
OFF	(NA)	NAO(AG)	ENL	OFF		(NA)	NAO(AG)	ENL	OFF	(NA)	NAO(AG)	ENL	OFF/ENL						
				1-C54	112 (34)	(1)	(77)	846									1-C54	MCAS CHERRY POINT	
				1-C119E													1-C119E		
				1-C117D													1-C117D		
				1-U11A													1-U11A		
				2-T1A													6-T33		
				1-VTAPX													1-UH34D		
				2-UH34D															
+6	-	-	(+6)	+100	15-TA4E	40 (34)	-	(6)	244								15-TA4E	2D MAW	
					10-TA6A												1-TF9J	VMT-1	
-	-	-	-	+16		108 (42)	(1)	(65)	635	126 (42)	(1)	(83)	651	11/18			MWHG-2		
						30 (9)	-	(21)	140	33 (9)	-	(24)	140	-/2			H&S-2		
						25 (6)	-	(19)	202	28 (6)	-	(22)	202	-/3			MASS-1		
-	-	-	-	+9		35 -	-	(35)	612	36 -	-	(36)	621	1/11			MACS		
						10 (9)	(1)	-	4	10 (9)	(1)	-	4	23/35			3D LAAM BN		
																	FOR DENT CO		
																	NATOPS		
						34 (8)	-	(26)	321	36 (8)	-	(28)	321				MASSG-27		
						17 (5)	-	(12)	417	20 (5)	-	(15)	492	4/17			H&S-27		
+1	-	-	(+1)	+75	4-C117D	14 (8)	-	(6)	204	14 (8)	-	(6)	204				MASS-27		
					2-C130												H&S-27		
					4-TA4E														
+3	(+3)	-	-	+22	13-KC130	39 (36)	-	(3)	276	52 (48)	-	(4)	276	1/3			VMH-2		
						3 (1)	-	(2)	38	3 (1)	-	(2)	38				VMGR-252		
																	MARISAT		
+35(+16)	-	(+19)	+378	1-C130		-	-	-	-	-	-	-	-	-			1-C117/47	MAG-14	
					2-T1A												H&S-14		
+22 (+6)	-	(+16)	+452			-	-	-	-	-	-	-	-	-			MASS-14		
						38 (17)	(17)	(4)	254	48 (21)	(21)	(6)	254	1/4			VMA(AW)		
						38 (17)	(17)	(4)	254	48 (21)	(21)	(6)	254	1/4			VMA		
						32 (28)	-	(4)	184	41 (35)	-	(6)	184	1/4			VMA		
						10 (2)	-	(8)	54	10 (2)	-	(8)	54				MATCU-61		
+1	-	-	(+1)	+19	1-C130	32 (16)	-	(16)	403	34 (16)	-	(18)	403				1-C117	MAG-24	
					3-TA4E												H&S-24		
-	-	-	-	+99		20 (6)	-	(14)	353	22 (6)	-	(16)	452	6/18			MASS-24		
						46 (21)	(21)	(4)	285	58 (26)	(26)	(6)	285	1/4			VMFA		
						46 (21)	(21)	(4)	273	58 (26)	(26)	(6)	273	1/4			VMFA		
						38 (17)	(17)	(4)	254	48 (21)	(21)	(6)	254	1/4			VMA		
						10 (2)	-	(8)	54	10 (2)	-	(8)	54				MATCU-74		
						55 (25)	(25)	(5)	390	71 (32)	(32)	(7)	390	1/4			VMJ-2		
+62(+25)	-	(+37)	+1036			645(296)	(120)(229)	4995		770(344)	(149)(277)	5185	52/124				TOTALS (PERSONNEL)		
						35	-	(35)	812								MAW		
+6	-	-	(+6)	+100		40 (34)	-	(6)	244								LAAM BN		
						112 (34)	(1)	(77)	846								HO FMP		
						5	-	(5)	11								MCAS, MCAF		
						35	-	(35)	101								CIT		
						40	-	(40)	120								FMP NAVY		
																	STATION NAVY		
						916(364)	(121)(431)	6929									CHERRY POINT BASE LOAD		
					2-TC45J	27 (11)	-	(16)	259								2-TC45J	MCAF NEW RIVER	
					3-T28												3-T28		
+1	-	-	(+1)	+6	1-C117	32 (16)	-	(16)	447	36(16)	-	(20)	447				1-C117	MAG-26	
						27 (10)	-	(17)	544	30(10)	-	(20)	594	4/10			H&S-26		
						57 (53)	-	(4)	181	65 (60)	-	(5)	181	1/3			24-CH46A	HHM	
						57 (53)	-	(4)	181	65 (60)	-	(5)	181	1/3			24-CH46A	HHM	
						57 (53)	-	(4)	181	65 (60)	-	(5)	181	1/3			24-CH46A	HHM	
						57 (53)	-	(4)	180	65 (60)	-	(5)	180	1/3			24-UH34D	HHM	
						57 (53)	-	(4)	180	65 (60)	-	(5)	180	1/3			24-UH34D	HHM	
						62 (58)	-	(4)	191	65 (60)	-	(5)	191	1/3			24-CH3A	HHM-461	
					12-UH1E	33 (29)	-	(4)	179	53 (48)	-	(5)	179	1/3			24-UH1E	VMO-1	
					10-OV10A														
						25 (6)	-	(19)	223	28 (6)	-	(22)	223	-/3			MACS		
						10 (2)	-	(8)	54	10 (2)	-	(8)	54				MATCU-64		
						10 (2)	-	(8)	54	10 (2)	-	(8)	54				MATCU-78		
+1	-	-	(+1)	+53		484(388)	-	(96)	2595	557(444)	-	(113)	2645	11/34			TOTALS (PERSONNEL)		
						27 (11)	-	(16)	259								MAW		
						8	-	(8)	14								MCAS, MCAF		
						7	-	(7)	15								FMP NAVY		
						526(399)	-	(127)	2883								STATION NAVY		
																	NEW RIVER STATION LOAD		

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OBJECTIVES					FYFS&FP (MANNING LEVEL)				TABLE OF ORGANIZATION (T.O.)				NAVY		AUTH			
PERSONNEL																		
OFF	(NA)	(NAO)	(AG)	ENL	AIRCRAFT	OFF	(NA)	(NAO)	(AG)	ENL	OFF	(NA)	(NAO)	(AG)	ENL	OFF/ENL	AIRCRAFT	
					1-C54 2-C6B 2-T1A 2-VTAPX 2-UH34D	112 (34)	(1)	(77)	846								1-C54 1-C117E 1-C117D 1-U11A 5-T33 2-UH34D	MCAS CHERRY POINT
#6	-	-	(#6)	#100	15-TA4E 10-TA6A	40 (34)	-	(6)	244								24-TA4E	2D MAW VMT-1
						107 (42)	(1)	(64)	651	126 (42)	(1)	(83)	651	11/18				MWBC-2
						30 (9)	-	(21)	140	33 (9)	-	(24)	140	-/2				BGRS-2
						25 (6)	-	(19)	223	28 (6)	-	(22)	223	-/3				MABS-1
				#9		35	-	(35)	612	36	-	(36)	621	1/11				MAGS
						10 (9)	(1)	-	4	10 (9)	(1)	-	4	23/35				3D LAAM BN FOR DENT CO
						34 (8)	-	(26)	321	34 (8)	-	(28)	321					NATOFS
				#56		16 (5)	-	(11)	436	20 (5)	-	(15)	492	4/17				MWBC-27
#1	-	-	(#1)	#6	2-C117D 3-C130 4-TA4E	14 (8)	-	(6)	204	14 (8)	-	(6)	204					BGRS-27
																		MABS-27
																		MABS-27
#18 (#18)	-	-		#125	18-MC130	39 (36)	-	(3)	276	32 (48)	-	(4)	276	1/3				2-C54
						3 (1)	-	(2)	38	3 (1)	-	(2)	38					3-C117
																		4-T1A
																		2-A1E
																		12-KC130
#35 (#16)	-	(#19)	#378		1-C130 2-TA4E	-	-	-	-	-	-	-	-	-				VMW-2
																		VMGR-252
																		MARTSAT
#22 (#6)	-	(#16)	#452															MAG-14
																		BGRS-14
																		MABS-14
#16 (#8) (#8)	-		#59		15-A6A	38 (17)	(17)	(4)	254	48 (21)	(21)	(6)	254	1/4				VMA (AW)
#16 (#8) (#8)	-		#59		15-A6A	38 (17)	(17)	(4)	254	48 (21)	(21)	(6)	254	1/4				VMA
			#1			32 (28)	-	(4)	184	41 (35)	-	(6)	184	1/4				VMA
						10 (2)	-	(8)	54	10 (2)	-	(8)	54					MATCU-61
																		MAG-24
#1	-	-	(#1)	-25	1-C117 3-TA4E	32 (16)	-	(16)	403	34 (16)	-	(18)	403					BGRS-24
				#82		20 (6)	-	(14)	370	22 (6)	-	(16)	452	6/18				MABS-24
				#1		46 (21)	(21)	(4)	285	58 (26)	(26)	(6)	285	1/4				VMFA
				#1		46 (21)	(21)	(4)	273	58 (26)	(26)	(6)	273	1/4				15-F4J
																		15-F4B
#16 (#8) (#8)	-		#59		15-A6A	38 (17)	(17)	(4)	254	48 (21)	(21)	(6)	254	1/4				VMFA
						10 (2)	-	(8)	54	10 (2)	-	(8)	54					VMA
						55 (25)	(25)	(5)	390	71 (32)	(32)	(7)	390	1/4				MATCU-74
																		VMCJ-2
#125 (#6) (#26)	(#37)		#1254			643 (296)	(120)	(227)	5068	770 (344)	(149)	(277)	3206	52/124				TOTALS (PERSONNEL)
						35	-	(35)	612									MAW
						40 (34)	-	(6)	244									LAAM BN
						112 (34)	(1)	(77)	846									HD FMP
						39	-	(39)	101									MCAS, MCAF
						40	-	(40)	120									CIT
																		FMP NAVY
																		STATION NAVY
						914 (364)	(121)	(429)	7002									CHERRY POINT BASE LOAD
					2-TC45J 3-T2B	27 (11)	-	(16)	259									2-TC45J
																		2-T2B
#1	-	-	(#1)	#6	1-C117	32 (16)	-	(16)	447	36 (16)	-	(20)	447					1-C117
				#39		27 (10)	-	(17)	553	30 (10)	-	(20)	504	4/10				BGRS-26
				#1		57 (33)	-	(4)	181	65 (60)	-	(5)	181	1/3				MABS-26
				#1		57 (33)	-	(4)	181	65 (60)	-	(5)	181	1/3				24-CH46A
				#1		57 (33)	-	(4)	181	65 (60)	-	(5)	181	1/3				24-CH46A
				#1		57 (33)	-	(4)	181	65 (60)	-	(5)	181	1/3				24-CH46A
				#1		57 (33)	-	(4)	181	65 (60)	-	(5)	181	1/3				24-CH46A
				#1		57 (33)	-	(4)	180	65 (60)	-	(5)	180	1/3				24-CH46A
				#1		62 (58)	-	(4)	191	65 (60)	-	(5)	191	1/3				24-CH46A
#7 (#7)	-	-		#16	12-UH1E 18-OV10A	33 (29)	-	(4)	179	53 (48)	-	(5)	179	1/3				24-UH1E
						25 (6)	-	(19)	223	28 (6)	-	(22)	223	-/3				VMO-1
						10 (2)	-	(8)	54	10 (2)	-	(8)	54					MAGS
						10 (2)	-	(8)	54	10 (2)	-	(8)	54					MATCU-64
						10 (2)	-	(8)	54	10 (2)	-	(8)	54					MATCU-78
#8 (#7)	-	(#1)	#68			28 (388)	-	(95)	2607	557 (444)	-	(113)	2646	11/34				TOTALS (PERSONNEL)
						27 (11)	-	(16)	259									MAW
						8	-	(8)	14									MCAS, MCAF
						7	-	(7)	15									FMP NAVY
						526 (399)	-	(127)	2895									STATION NAVY
																		NEW RIVER STATION LOAD

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## OBJECTIVES

**FYFS&FP  
(MANNING LEVEL)**

**TABLE OF ORGANIZATION  
(T.O.)**

NAVY

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OBJECTIVES					FYFS&FP (MANNING LEVEL)					TABLE OF ORGANIZATION (T.O.)					NAVY		AUTH	AIRCRAFT
PERSONNEL					AIRCRAFT											OFF/ENL		
OFF	(NA)	(MAO)	(AO)	ENL		OFF	(NA)	(MAO)	(AO)	ENL	OFF	(NA)	(MAO)	(AO)	ENL	OFF/ENL		
					2-FC4B											MCAS CHERRY POINT		
					2-C4B													
					2-T1A													
					2-VTAPX													
					2-UB34D													
					15-VTAJX											2D MAW		
					10-TA6A											VT-1		
126	(42)	(1)	(83)	651												MWRC-2		
33	(9)	-	(24)	140												BMS-2		
28	(6)	-	(22)	223												BMS-1		
36	-	-	(36)	621												MACS		
																3D LAAM BN		
10	(9)	(1)	-	4												FOR DENT CO		
36	(8)	-	(28)	321												NATOPS		
20	(5)	-	(15)	492												MWSG-27		
15	(8)	-	(7)	210												BMS-27		
					3-C130											BMS-27		
					4-VTAJX													
56	(25)	(25)	(6)	246	9-E2A											VMW-2		
58	(54)	-	(4)	401	18-VGX											VMGR-252		
3	(1)	-	(2)	38												MARISAT		
35	(16)	-	(19)	378	1-C130											MAG-14		
					2-VTAJX											BMS-14		
22	(6)	-	(16)	452												BMS-14		
48	(21)	(21)	(6)	313	15-A6A											VMA(AW)		
48	(21)	(21)	(6)	313	15-A6A											VMA		
34	(28)	-	(6)	286	20-A7A											VMA		
10	(2)	-	(8)	54	X											MATCU-61		
35	(16)	-	(19)	378	1-C130											MAG-24		
22	(6)	-	(16)	452	3-2A44											BMS-24		
48	(21)	(21)	(6)	286	15-F4J											BMS-24		
48	(21)	(21)	(6)	286	15-F4J											VMFA		
48	(21)	(21)	(6)	313	15-A6A											VMFA		
10	(2)	-	(8)	54	X											VMA		
57	(25)	(25)	(7)	391	9-VAOMX											MATCU-74		
					6-RR4B											VMCJ-2		
					3-VFPX													
850	(373)	(157)	(620)	6682												TOTALS (PERSONNEL)		
																MAW		
																LAAM BN		
																NO FMP		
																MCAS, MCAP		
																CIT		
																FMP NAVY		
																STATION NAVY		
																CHERRY POINT BASE LOAD		
					2-VTAPX											MCAP NEW RIVER		
					3-F28													
37	(16)	-	(21)	453	1-C130											MAG-26		
30	(10)	-	(20)	594												BMS-26		
58	(53)	-	(5)	182	24-HMX											BMS-26		
58	(53)	-	(5)	182	24-HMX											BHM		
58	(53)	-	(5)	182	24CR46A											BHM		
58	(53)	-	(5)	182	24CH46A											BHM		
58	(53)	-	(5)	182	24CR46A											BHM		
63	(58)	-	(5)	192	24CH53A											BHM-461		
41	(36)	-	(5)	193	12-HLX											VMD-1		
					18-OV10A													
28	(6)	-	(22)	223												MACS		
10	(2)	-	(8)	54	X											MATCU-64		
10	(2)	-	(8)	54	X											MATCU-78		
509	(395)	-	(114)	2673												TOTALS (PERSONNEL)		
																MAW		
																MCAS, MCAP		
																FMP NAVY		
																STATION NAVY		
																NEW RIVER STATION LOAD		

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OBJECTIVES				FYFS&FP (MANNING LEVEL)				TABLE OF ORGANIZATION (T.O.)				NAVY		AUTH	
PERSONNEL												OFF/ENL		AIRCRAFT	
OFF	(NA)	(NAO)	(AO)	ENL	AIRCRAFT	OFF	(NA)	(NAO)	(AO)	ENL	AIRCRAFT	OFF/ENL	AIRCRAFT		
					2-TC4B										MCAS CHERRY POINT
					2-C4B										
					2-T1A										
					2-VTAFX										
					2-UB34D										
					15-VTAJX										2D MAW
					10-TA6A										VMT-1
															MWHG-2
126	(42)	(1)	(83)	651											HABS-2
33	(9)	-	(24)	140											HABS-1
28	(6)	-	(22)	223											MACS
36	-	-	(36)	621											3D LAAM BN
															FOR DENT CO
10	(9)	(1)	-	4											NATOPS
															MWSG-27
36	(8)	-	(28)	321											HABS-27
20	(5)	-	(15)	492											HABS-27
15	(8)	-	(7)	210											HABS-27
					3-C130										
					4-VTAJX										
56	(25)	(25)	(6)	246	3-E2A										VWV-2
58	(54)	-	(4)	401	8-VGX										VNCR-252
3	(1)	-	(2)	38											MARISAT
															MAG-14
35	(16)	-	(19)	378	1-C130										HABS-14
					2-VTAJX										
22	(6)	-	(16)	452											HABS-14
48	(21)	(21)	(6)	313	15-A6A										VMA(AW)
48	(21)	(21)	(6)	313	15-A6A										VMA
34	(28)	-	(6)	286	20-A7A										VMA
10	(2)	-	(8)	54	X										MATCU-61
															MAG-24
35	(16)	-	(19)	378	1-C130										HABS-24
					2-VTAJX										
22	(6)	-	(16)	452											HABS-24
48	(21)	(21)	(6)	286	15-F4J										VMFA
48	(21)	(21)	(6)	286	15-F4J										VMFA
48	(21)	(21)	(6)	313	15-A6A										VMA
10	(2)	-	(8)	54	X										MATCU-74
															VMAJ-2
57	(25)	(25)	(7)	391	3-VAOMX										
					9-VJFX										
															TOTALS (PERSONNEL)
850	(373)	(57)	(320)	6682											MAW
															LAAM BN
															HO FMP
															MCAS, MCAF
															U11
															FMP NAVY
															STATION NAVY
															CHERRY POINT BASE LOAD
					2-VTAFX										MCAF NEW RIVER
					3-T28										
															MAG-26
37	(16)	-	(21)	453	1-C130										HABS-26
30	(10)	-	(20)	594											HABS-26
58	(53)	-	(5)	182	24-HMX										HMM
58	(53)	-	(5)	182	24-HMX										HMM
58	(53)	-	(5)	182	24-HMX										HMM
58	(53)	-	(5)	182	24-HMX										HMM
58	(53)	-	(5)	182	24-CM46A										HMM
58	(53)	-	(5)	182	24-CM46A										HMM
63	(58)	-	(5)	192	24-HHX										HMM-461
					12-HLX										VMD-1
41	(36)	-	(5)	193	15-FW104										MACS
28	(6)	-	(22)	223	3-VOLX										MATCU-64
10	(2)	-	(8)	54	X										MATCU-78
10	(2)	-	(8)	54	X										
															TOTALS (PERSONNEL)
509	(395)	-	(114)	2673											MAW
															MCAS, MCAF
															FMP NAVY
															STATION NAVY
															NEW RIVER STATION LOAD

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OBJECTIVES					FYFS&FP (MANNING LEVEL)					TABLE OF ORGANIZATION (T.O.)							
PERSONNEL										NAVY					AUTH		
OFF	(NA)	NAO	(AG)	ENL	AIRCRAFT	OFF	(NA)	NAO	(AG)	ENL	OFF	(NA)	NAO	(AG)	ENL	OFF/ENL	AIRCRAFT
						47	(14)	-	(33)	389							1-C117D 1-C47 2-T1A 2-UH-34D
						32	(16)	-	(16)	372							MAG-31 H&MS-31
						20	(6)	-	(14)	410							1-C117/47 3-T1A
						25	(21)	-	(4)	172							15-F8D 15-F8E
						25	(21)	-	(4)	172							20-A4E X
						32	(28)	-	(4)	184							1-C117A7 3-T1A
						10	(2)	-	(8)	54							15-F4B 15-F8C
						32	(16)	-	(16)	372							20-A4E X
						20	(6)	-	(14)	411							MACS MATCU-63
						46	(21)	(21)	(4)	273							TOTALS (PERSONNEL)
						25	(21)	-	(4)	164							MAW
						32	(28)	-	(4)	184							MCAS, MCAF
						26	(6)	-	(20)	202							FME NAVY
						10	(2)	-	(8)	54							STATION NAVY
						335	(194)	(21)	(12)	3024							BEAUFORT BASE LOAD
						47	(14)	-	(33)	389							7-T28 1-VC54 1-C117 2-RC45J 8-TC45J 4-VH3A 1-SR3A 8-CR46A 4-VH34E 3-UH34E 4-UH1E
						13	-	-	(13)	44							MCAS QUANTICO SOBS
						16	-	-	(16)	42							HMX-1
						411	(208)	(21)	(18)	3499							TOTALS (PERSONNEL)
																	MCAS QUANTICO HMX FME NAVY STATION NAVY
																	QUANTICO BASE LOAD
																	NAF ANDREWS HQMC FLT SECT
																	1-C54 1-C131 1-VC117 9-T28 2-T33 1-U11A
																	TOTAL (PERSONNEL)
																	GMD DIRECTION
																	GRAND TOTALS
						376	(276)	(208)	(129)	2736							MAW
						413	(127)	(1)	(285)	3263							MCAS, MCAF
						97	-	-	(97)	1563							LAAM BN
						153	(112)	-	(41)	605							HQ FME

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**END FISCAL YEAR 1966**

OBJECTIVES					FYFS&FP (MANNING LEVEL)					TABLE OF ORGANIZATION (T.O.)					NAVY					AUTH		
PERSONNEL					AIRCRAFT	PERSONNEL					AIRCRAFT	PERSONNEL					NAVY	AUTH		AIRCRAFT		
OFF	(NA)	(NAO)	(AO)	ENL		OFF	(NA)	(NAO)	(AO)	ENL		OFF	(NA)	(NAO)	(AO)	ENL		OFF/ENL				
					1-C117D	47	(14)	-	(39)	389								1-C117D	MCAS BEAUFORT			
					1-C47													1-C47				
					2-T1A													2-T1A				
					2-UH2B													2-UH34D				
					1-C117	32	(16)	-	(16)	371	34	(16)	-	(18)	372			1-C117/47	MAG-31			
					3-T1A													3-T1A	HMS-31			
						19	(6)	-	(13)	362	22	(6)	-	(16)	432	6/18			MABS-31			
						25	(21)	-	(4)	172	32	(26)	-	(6)	172	1/4	15-F8D	VMP(AW)				
						25	(21)	-	(4)	172	32	(26)	-	(6)	172	1/4	15-F8E	VMP(AW)				
						32	(28)	-	(4)	184	41	(35)	-	(6)	184	1/4	20-A4E	VMA				
						10	(2)	-	(8)	54	10	(2)	-	(8)	54		X	MATCU-69				
						32	(16)	-	(16)	371	34	(16)	-	(18)	372		1-C47	MAG-32				
					1-C117												3-T1A	HMS-32				
					3-T1A	19	(6)	-	(13)	362	22	(6)	-	(16)	432	6/18		MABS-32				
						46	(21)	(21)	(4)	273	58	(26)	(26)	(6)	273	1/4	15-F4B	VMA				
						46	(21)	(21)	(4)	273	58	(26)	(26)	(6)	273	1/4	15-F4B	VMP				
						32	(28)	-	(4)	184	41	(35)	-	(6)	184	1/4	20-A4E	VMA				
						26	(6)	-	(20)	202	28	(6)	-	(22)	202	-/3		MACS				
						10	(2)	-	(8)	54	10	(2)	-	(8)	54		X	MATCU-63				
						354	(194)	(42)	(118)	3034	422	(228)	(52)	(442)	3216			TOTALS (PERSONNEL)				
						47	(14)	-	(33)	389								MAW				
						13	-	-	(13)	44								MCAS, MCAF				
						16	-	-	(16)	42								FMP NAVY				
						430	(208)	(42)	(180)	3509								STATION NAVY				
																		BEAUFORT BASE LOAD				
					1-VC54													1-VC54	MCAS QUANTICO			
					1-C117D													1-C117D	SOCS			
					1-MC45J													1-MC45J				
					6-TC45J													6-TC45J				
					7-T28													7-T28				
					4-VH3A													4-VH3A	HMX-1			
					1-SH3A													1-SH3A				
					8-CH46A													8-CH46A				
					4-VH34D													4-VH34D				
					3-UH34D													3-UH34D				
					4-UH1E													4-UH1E				
																			TOTALS (PERSONNEL)			
																			MCAS QUANTICO			
																		HMX				
																		FMP NAVY				
																		STATION NAVY				
																			QUANTICO BASE LOAD			
													</									

## OBJECTIVES

**FYFS&FP**  
**(MANNING LEVEL)**

**TABLE OF ORGANIZATION  
(T.O.)**

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END FISCAL YEAR 1968

OBJECTIVES					FYFS&P (MANNING LEVEL)					TABLE OF ORGANIZATION (T.O.)								
PERSONNEL					AIRCRAFT						NAVY					AUTH (AIRCRAFT)		
OFF	(NA)	(NAO)	(AG)	ENL		OFF	(NA)	(NAO)	(AG)	ENL	OFF	(NA)	(NAO)	(AG)	ENL		OFF/ENL	
					1-C117D 1-C47 2-T1A 2-UH2B	47	(14)	-	(33)	389							1-C117D 2-T1A 2-UH34D	MCAS BEAUFORT
#1	-	-	(#1)	#6	1-C117 3-TA4E	32	(16)	-	(16)	372	34	(16)	-	(18)	372		1-C47 3-T1A	MAG-31 HMS-31
-	-	-	-	#99		20	(6)	-	(14)	353	22	(6)	-	(16)	452	6/18		MABS-31
				#1		46	(21)	(21)	(4)	273	58	(26)	(26)	(6)	273	1/4	15-F4B	VNF(AW)
				#1		46	(21)	(21)	(4)	273	58	(26)	(26)	(6)	273	1/4	15-F4B	VNF(AW)
				#1		32	(28)	-	(4)	285	41	(35)	-	(6)	285	1/4	20-A7A	VMA
						10	(2)	-	(8)	54	10	(2)	-	(8)	54		X	MATCU-69
#1	-	-	(#1)	#6	1-C117 3-TA4E	32	(16)	-	(16)	372	34	(16)	-	(18)	372		1-C47 3-T1A	MAG-32 HMS-32
-	-	-	-	#99		20	(6)	-	(14)	353	22	(6)	-	(16)	452	6/18		MABS-32
				#1		46	(21)	(21)	(4)	273	58	(26)	(26)	(6)	273	1/4	15-F4B	VNFA
				#1		46	(21)	(21)	(4)	273	58	(26)	(26)	(6)	273	1/4	15-F4B	VNF
				#1		32	(28)	-	(4)	285	41	(35)	-	(6)	285	1/4	20-A7A	VMA
				#1		25	(6)	-	(19)	223	28	(6)	-	(22)	223	-/3		MAGS
						10	(2)	-	(8)	54	10	(2)	-	(8)	54		X	MATCU-63
#2	-	-	(#2)	#217		397	(194)	(84)	(119)	3443	474	(228)	(104)	(142)	3641	18/63		TOTALS (PERSONNEL)
						47	(14)	-	(33)	389								MAW
						13	-	-	(13)	44								MCAS, MCAF
						16	-	-	(16)	42								FMF NAVY
						473	(208)	(84)	(181)	3918								STATION NAVY
																		BEAUFORT BASE LOAD
					1-YC54 1-C117D 1-RC45J 6-TC45J 7-T28 2-CH53A 4-VH3A 1-SH3A 9-CH46A 4-VH34D 4-UH1E												1-C117D 1-RC45J 7-TC45J 7-T28 2-CH53A 4-VH3A 1-SH3A 9-CH46A 4-VH34D 4-UH1E	MCAS QUANTICO SOES BMX-1
																		TOTALS (PERSONNEL)
																		MCAS QUANTICO
																		BMX
																		FMF NAVY
																		STATION NAVY
																		QUANTICO BASE LOAD
					1-C54 1-C131 1-C140 3-T28 10-T1A 1-U11A												1-C54 1-C131 1-VC117 3-T28 2-T33 1-U11A	NAF ANDREWS HQMC FLT SECT
																		TOTAL (PERSONNEL)
																		CMD DIRECTION
#97	(#36)	(#6)	(#5)	#290		408	(264)	(48)	(124)	29573	4802	(274)	(59)	(148)	30701			GRAND TOTALS
						408	(127)	(1)	(280)	3263								MAW
-	-	-	-	#27		109	-	-	(109)	1932								MCAS, MCAF
#11	-	-	(#11)	#264		159	(121)	-	(38)	750								LAAM BN
																		HQ FMF

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## OBJECTIVES

**FYFS&FP**  
**(MANNING LEVEL)**

**TABLE OF ORGANIZATION  
(T.O.)**

**PERSONNEL**

NAVY

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**END FISCAL YEAR 19 70**[illegible]

## OBJECTIVES

**FYFS&FP**  
**(MANNING LEVEL)**

**TABLE OF ORGANIZATION  
(T.O.)**

PERSONNEL					(MANNING LEVEL)					(F.O.)					NAVY		AUTN	
OFF	(NA)	(NAO)	(AO)	ENL	AIRCRAFT	OFF	(NA)	(NAO)	(AO)	ENL	OFF	(NA)	(NAO)	(AO)	ENL	OFF/ENL	AIRCRAFT	
					2-C4B												MCAS BEAUFORT	
					2-T1A													
					2-WH34D													
35	(16)	-	(19)	378	1-C130												MAG-31	
					1-TA4E												MCAS-31	
22	(6)	-	(16)	452													MAB-31	
48	(21)	(21)	(6)	274	15-F4B												VHF(AW)	
48	(21)	(21)	(6)	274	15-F4B												VHF(AW)	
34	(28)	-	(6)	286	20-A7A												VMA	
10	(2)	-	(8)	54	X												MATCU-69	
35	(16)	-	(19)	378	1-C130												MAG-32	
					2-TA4E												MCAS-32	
22	(6)	-	(16)	452	1-VTAIX												MAB-32	
48	(21)	(21)	(6)	274	15-F4B												VNFA	
48	(21)	(21)	(6)	274	15-F4B												VNF	
34	(28)	-	(6)	286	20-A7A												VMA	
28	(6)	-	(22)	223													MAGS	
10	(2)	-	(8)	54	X												MATCU-63	
622	(194)	(8)	(144)	3659													TOTALS (PERSONNEL)	
																	MAW	
																	MCAS, MCAF	
																	FNF NAVY	
																	STATION NAVY	
																	BEAUFORT BASE LOAD	
					1-C54												MCAS QUANTICO	
					1-C117D												SORS	
					7-VTAPX													
					7-T2B													
					2-CH53A												RMK-1	
					4-VH3A													
					1-SH3A													
					9-CH46A													
					4-VH34D													
					4-UH1E													
																	TOTALS (PERSONNEL)	
																	MCAS QUANTICO	
																	RMK	
																	FNF NAVY	
																	STATION NAVY	
																	QUANTICO BASE LOAD	
					1-C54												NAF ANDREWS	
					1-C131												HQMC FLT SECT	
					1-C140													
					5-T2B													
					10-T1A													
					1-U11A													
																	TOTAL (PERSONNEL)	
																	CMD DIRECTION	
																	GRAND TOTALS	
																	MAW	
																	MCAS, MCAF	
																	LAAM BN	
																	HQ FNF	
4725	(577)	(596)	(1554)	33859														
112	-	-	(112)	1958														

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**END FISCAL YEAR 19 72**

OBJECTIVES					FYFS&FP (MANNING LEVEL)					TABLE OF ORGANIZATION (T.O.)					END FISCAL YEAR 1972			
PERSONNEL															NAVY		AUTH	
OFF	(NA)	NAG	AO	EML	AIRCRAFT	OFF	(NA)	NAG	AO	EML	OFF	(NA)	NAG	AO	EML	OFF/EML	AIRCRAFT	
					2-C4B 2-T1A 2-UH34D												MCAS BEAUFORT	

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**END FISCAL YEAR 1973**[illegible]

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END FISCAL YEAR 19 74

OBJECTIVES					FYFS&FP (MANNING LEVEL)					TABLE OF ORGANIZATION (T.O.)						
PERSONNEL					AIRCRAFT						NAVY		AUTH AIRCRAFT			
OFF	(NA)	NAO	AO	ENL		OFF	(NA)	NAO	AO	ENL	OFF/ENL					
					2-C4B 2-T1A 2-UH34D									MCAS BEAUFORT		
35	(16)	-	(19)	378	1-C130 3-VTAJX									MAG-31 HMS-31		
22	(6)	-	(16)	452										MARS-31		
48	(21)	(21)	(6)	304	15-VFFB									VMF(AW)		
48	(21)	(21)	(6)	304	15-VFFB									VMF(AW)		
34	(28)	-	(6)	286	20-A7A									VMA		
10	(2)	-	(8)	54	X									MATCU-69		
35	(16)	-	(19)	378	1-C130 3-VTAJX									MAG-32 HMS-32		
22	(6)	-	(16)	452										MARS-32		
48	(21)	(21)	(6)	304	15-VFFB									VMFA		
48	(21)	(21)	(6)	286	15-F4J									VMF		
34	(28)	-	(6)	286	20-A7A									VMA		
28	(6)	-	(22)	223										MACS		
10	(2)	-	(8)	54	X									MATCU-63		
422	(194)	(84)	(144)	3761										TOTALS (PERSONNEL) MAW MCAS, MCAF FME NAVY STATION NAVY		
														BEAUFORT BASE LOAD		
					1-C54 1-C112D 7-VTAJX 7-T28									MCAS QUANTICO SOCS		
					2-CH53A 4-VB3A 1-SH3A 9-CH46A 4-VB34D 4-UH1E									HMX-1		
														TOTALS (PERSONNEL) MCAS QUANTICO HMX FME NAVY STATION NAVY		
														QUANTICO BASE LOAD		
					1-C54 1-C131 1-C140 5-T28 10-T1A 1-UH1A									NAF ANDREWS HOMC FLT SECT		
														TOTAL (PERSONNEL) CMD DIRECTION		
725	(257)	(96)	(152)	3188										GRAND TOTALS MAW MCAS, MCAF LAAM BN HQ FME		
112	-	-	(112)	1959												

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## 4TH MARINE AIRCRAFT WING REQUIREMENTS/OBJECTIVES - M-DAY FY 66

LIN 3	4th Marine Aircraft Wing	AIRCRAFT			T.O.				PERSONNEL OBJECTIVE			
		Available	Authorized	Objective	NA	NAO	AG	ENT	NA	NAO	AG	ENT
	MWHG-4											
	H&HS				42	1	83	651				
	MASS-4				9	-	24	140				
	MACS-23				6	-	22	202				
	MACS-24				6	-	22	202				
	4th LAAM BN				-	-	36	621				
	VMJ/VMCJ-4	9 RF8A	9 VFP		16	-	6	118				
			9 VAQM						#16	#16	#1	#72
	MWSG-47											
	H&HS-47				8	-	28	321				
	MABS-47				5	-	15	492				
	MAMS-47	2 C-54	2 VR-H		8	-	6	204				
		2 C-117	2 VRM									
		3 T1A	3 VTBJ									
	MARTSAT-4				1	1	2	38				
	VMR-234	15 C-119	15 VRH		45	-	4	246				
	VMW-4											
	MAG-41	1 C-117	1 VRM									
	H&MS-41	3 T1A	3 VTBJ		16	-	18	372				
	MABS-41				6	-	16	452				
	VMF	15 F8B	15 VF-FB		26	-	6	164				
	VMF	15 F8B	15 VF-FB		26	-	6	164				
	VMA	20 A4B	20 VA		35	-	6	184				
	MATCU-71				2	-	8	54				
	MAG-42	1 C-117	1 VRM									
	H&MS-42	3 T1A	3 VTBJ		16	-	18	372				
	MABS-42				6	-	16	452				
	VMF	15 F8C	15 VF-FB		26	-	6	164				
	VMA	20 A4B	20 VA		35	-	6	184				
	VMA	20 A4B	20 VA		35	-	6	184				
	MATCU-72				2	-	8	54				
	MAG-43	1 C-117	1 VRM									
	H&MS-43	3 T1A	3 VTBJ		16	-	18	372				
	MABS-43				6	-	16	452				
	VMF	15 F8C	15 VF-FB		26	-	6	164				
	VMF	15 F8C	15 VF-FB		26	-	6	164				
	VMA	20 A4B	20 VA		35	-	6	184				
	MACS-17				6	-	22	202				
	MATCU-73				2	-	8	54				
	MAG-46											
	H&MS-46	1 C-117	1 VRM		16	-	20	447				
	MABS-46				10	-	20	594				
	VMO-4	24 OH43D	24 H-L		48	-	4	142				
	HMM-768	21 CH-19E	24 H-M		60	-	5	180				
	HMM-770	10 UH34J	24 H-M		60	-	5	180				
	HMM-772		24 H-M		60	-	5	180				
	HMM-776		24 H-M		60	-	5	180				
	HMM-777		24 H-M		60	-	5	180				
	HMH-464		24 H-H		60	-	5	191				
	MATCH-76				2	-	8	54				
	(PERSONNEL REQUIRED (4TH MAW))				930	1	532	9955	#16	#16	#1	#72
	(AUGMENT 3 IN-BEING WINGS)				376	88	255	1248				
	AGGREGATE				1304	89	787	12,203				

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## 4TH MARINE AIRCRAFT WING REQUIREMENTS/OBJECTIVES - M-DAY FY 67

LINE	4th Marine Aircraft Wing	AIRCRAFT			T.O				PERSONNEL OBJECTIVE			
		Available	Authorized	Objective	NA	NAO	AG	ENL	NA	NAO	AG	ENL
	MWHG-4											
	H&HS-4				42	1	83	651				
	MASS-4				9	-	24	140				
	MACS-23				6	-	22	202				
	MACS-24				6	-	22	202				
	4th LAAM BN				-	-	36	621				
	VMJ/VMCJ-4	9 RF8A	9 VFP		16	-	6	118				
			9 VAQM						416	416	41	472
	MWSG-47											
	H&HS-47				8	-	28	321				
	MABS-47				5	-	15	492				
	MAMS-47	2 C-54	2 VRH		8	-	6	204				
		2 C-117	2 VRM									
		3 T1A	3 VTBJ									
	MARTSAT-4				1	-	2	38				
	VMR-234	15 C-119	15 VRH		45	-	4	246				
	VMW-4											
	MAG-41	1 C-117	1 VRM									
	H&MS-41	3 T1A	3 VTBJ		16	-	18	372				
	MABS-41				6	-	16	452				
	VMF	15 F8C	15 VF-FB		26	-	6	164				
	VMF	15 F8C	15 VF-FB		26	-	6	164				
	VMA	20 A4B	20 VA		35	-	6	184				
	MATCU-71				2	-	8	54				
	MAG-42	1 C-117	1 VRM									
	H&MS-42	3 T1A	3 VTBJ		16	-	18	372				
	MABS-42				6	-	16	452				
	VMF	15 F8C	15 VF-FB		26	-	6	164				
	VMA	20 A4B	20 VA		35	-	6	184				
	VMA	20 A4B	20 VA		35	-	6	184				
	MATCH-72				2	-	8	54				
	MAG-43	1 C-117	1 VRM									
	H&MS-43	3 T1A	3 VTBJ		16	-	18	372				
	MABS-43				6	-	16	452				
	VMF	15 F8C	15 VF-FB		26	-	6	164				
	VMF	15 F8C	15 VF-FB		26	-	6	164				
	VMA	20 A4B	20 VA		35	-	6	184				
	MACS-17				6	-	22	202				
	MATCU-73				2	-	8	54				
	MAG-46											
	H&MS-46	1 C-117	1 VRM		16	-	20	447				
	MABS-46				10	-	20	594				
	VMO-4	24 OH43D	24 H-L		48	-	4	142				
	HMM-768	24 CH-19E	24 HM		60	-	5	180				
	HMM-770	10 UH34J	24 HM		60	-	5	180				
	HMM-772	24 CH-19E	24 HM		60	-	5	180				
	HMM-776	10 CH-19E	24 HM		60	-	5	180				
	HMM-777		24 HM		60	-	5	180				
	HMH-464	9 CH-37C	24 H-H		60	-	5	191				
	MATCU-76				2	-	8	54				
	(PERSONNEL REQUIRED (4th MAW))				930	1	532	9955	416	416	41	472
	(AUGMENT 3 IN-BEING WINGS)				372	113	222	304				
	AGGREGATE				1301	114	754	10,259				

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## 4TH MARINE AIRCRAFT WING REQUIREMENTS/OBJECTIVES - M-DAY FY 68

LINE	4th Marine Aircraft Wing	AIRCRAFT			T.O				PERSONNEL OBJECTIVE			
		Available	Authorized	Objective	NA	NAO	AG	ENL	NA	NAO	AG	ENL
	MWFG-4											
	H&HS-4				42	1	83	651				
	MASS-4				9	-	24	140				
	MACS-23				6	-	22	202				
	MACS-24				6	-	22	202				
	4th LAAM BN				-	-	36	621				
	VMI/VMCI-4	9 RF8A	9 VF-FB		16	-	6	118				
			9 VAQM						#16	#16	#1	#72
	MWSG-47											
	H&HS-47				8	-	28	321				
	MABS-47				5	-	15	492				
	MAMS-47	2 C-54	2 VRH		8	-	6	204				
		2 C-117	2 VRM									
		3 T1A	3 VTBJ									
	MARTSAT-4				1	-	2	38				
	VMR-234	15 C-119	15 VRH		45	-	4	246				
	VMW-4											
	MAG-41	1 C-117	1 VRM									
	H&MS-41	3 T1A	3 VTBJ		16	-	18	372				
	MABS-41				6	-	16	452				
	VMF	15 F8C	15 VF-FB		26	-	6	164				
	VMF	15 F8C	15 VF-FB		26	-	6	164				
	VMA	20 A4B	20 VA		35	-	6	184				
	MATCU-71				2	-	8	54				
	MAG-42	1 C-117	1 VRM									
	H&MS-42	3 T1A	3 VTBJ		16	-	18	372				
	MABS-42				6	-	16	452				
	VMF	15 F8C	15 VF-FB		26	-	6	164				
	VMA	20 A4B	20 VA		35	-	6	184				
	VMA	20 A4C	20 VA		35	-	6	184				
	MATCU-72				2	-	8	54				
	MAG-43	1 C-117	1 VRM									
	H&MS-43	3 T1A	3 VTBJ		16	-	18	372				
	MABS-43				6	-	16	452				
	VMF	15 F8C	15 VF-FB		26	-	6	164				
	VMF	15 F8D	15 VF-FB		26	-	6	172				
	VMA	20 A4C	20 VA		35	-	6	184				
	MACS-17				6	-	22	202				
	MATCU-73				2	-	8	54				
	MAG-46											
	H&MS-46	1 C-117	1 VRM		16	-	20	447				
	MABS-46				10	-	20	594				
	VMO-4	24 OH43D	24 H-L	12 OH43D	48	-	4	142				
				12 UH1E					-	-	#1	#22
	HMM-768	24 CH-19E	24 H-M		60	-	5	180				
	HMM-770	18 UH34J	24 H-M		60	-	5	180				
	HMM-772	17 CH-19E	24 H-M		60	-	5	180				
	HMM-776		24 H-M		60	-	5	180				
	HMM-777		24 H-M		60	-	5	180				
	HMH-464	21 CH37C	24 H-H		60	-	5	191				
	MATCU-76				2	-	8	54				
	(PERSONNEL REQUIRED (4TH MAW))				(930	1	532	9963)	#16	#16	#2	#94
	(AUGMENT 3 IN-BEING WINGS)				(360	114	241	1128)				
	AGGREGATE				1290	115	773	11,091				

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## 4TH MARINE AIRCRAFT WING REQUIREMENTS/OBJECTIVES - M-DAY FY 89

LINE	4th Marine Aircraft Wing	AIRCRAFT			T. O.				PERSONNEL OBJECTIVE			
		Available	Authorized	Objective	NA	NAO	AG	ENL	NA	NAC	AG	ENL
	MWEG-4											
	H&HS-4				42	1	83	651				
	MASS-4				9	-	24	140				
	MACS-23				6	-	22	202				
	MACS-24				6	-	22	202				
	4th LAAM BN				-	-	36	621				
	VMJ/VMCJ-4	9 RF8A	9 VFP		16	-	6	118				
			9 VAQM						#16	#16	#1	#72
	MWSG-47											
	H&HS-47				8	-	28	321				
	MABS-47				5	-	15	492				
	MAMS-47	2 C-54	2 VRH		8	-	6	204				
		2 C-117	2 VRM									
		3 T1A	3 VTBJ									
	MARTSAT-4				1	-	2	38				
	VMR-234	15 C-119	15 VRH		45	-	4	246				
	VMW-4											
	MAG-41	1 C-117	1 VRM									
	H&MS-41	3 T1A	3 VTBJ		16	-	18	372				
	MABS-41				6	-	16	452				
	VMF	15 F8C	15 VF-FB		26	-	6	164				
	VMF	15 F8C	15 VF-FB		26	-	6	164				
	VMA	20 A4C	20 VA	20 A4E	35	-	6	184				
	MATCU-71				2	-	8	54				
	MAG-42	1 C-117	1 VRM									
	H&MS-42	3 T1A	3 VTBJ		16	-	18	372				
	MABS-42				6	-	16	452				
	VMF	15 F8C	15 VF-FB		26	-	6	164				
	VMA	20 A4C	20 VA	20 A4E	35	-	6	184				
	VMA	20 A4C	20 VA	20 A4E	35	-	6	184				
	MATCU-72				2	-	8	54				
	MAG-43	1 C-117	1 VRM									
	H&MS-43	3 T1A	3 VTBJ		16	-	18	372				
	MABS-43				6	-	16	452				
	VMF	15 F8D	15 VF-FB		26	-	6	172				
	VMF	15 F8D	15 VF-FB		26	-	6	172				
	VMA	20 A4C	20 VA	20 A4E	35	-	6	184				
	MACS-17				6	-	22	202				
	MATCU-73				2	-	8	54				
	MAG-46											
	H&MS-46	1 C-117	1 VRM		16	-	20	447				
	MABS-46				10	-	20	594				
	VMO-4	24 OH43D	24 H-L	12OH43D	48	-	4	142				
				12 UH1E					-	-	#1	#22
	HMM-768	24 UH34D	24 H-M		60	-	5	180				
	HMM-770	20 UH34D	24 H-M		60	-	5	180				
	HMM-772		24 H-M		60	-	5	180				
	HMM-776		24 H-M		60	-	5	180				
	HMM-777		24 H-M		60	-	5	180				
	HMH-464	21 CH-37C	24 H-H		60	-	5	191				
	MATCU-76				2	-	8	54				
	(PERSONNEL REQUIRED (4TH MAW))				(930	1	532	9971)	#16	#16	#2	#94
	(AUGMENT 3 IN-BEING WINGS)				(364	118	247	854)				
	AGGREGATE				1294	118	779	10,825				

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## 4TH MARINE AIRCRAFT WING REQUIREMENTS/OBJECTIVES - M-DAY FY 70

LINE	4th Marine Aircraft Wing	AIRCRAFT			T. O.				PERSONNEL OBJECTIVE			
		Available	Authorized	Objective	NA	NAO	AG	ENT	NA	NAO	AG	ENT
	MWHG-4											
	H&HS-4				42	1	83	651				
	MASS-4				9	-	24	140				
	MACS-23				6	-	22	202				
	MACS-24				6	-	22	202				
	4th LAAM BN				-	-	36	621				
	VMJ/VMCJ-4	9 RF8A	9 VFP		16	-	6	118				
			9 VAQM						#16	#16	#1	#72
	MWSG-47											
	H&HS-47				8	-	28	321				
	MABS-47				5	-	15	492				
	MAMS-47	2 C-54	2 VRH		8	-	6	204				
		2 C-117	2 VRM									
		3 T1A	3 VTBJ									
	MARTSAT-4				1	-	2	38				
	VMR-234	15 C-119	15 VRH		45	-	4	246				
	VMW-4											
	MAG-41	1 C-117	1 VRM									
	H&MS-41	3 T1A	3 VTBJ		16	-	18	372				
	MABS-41				6	-	16	452				
	VMF	15 F8C	15 VFB		26	-	6	164				
	VMF	15 F8C	15 VFB		26	-	6	164				
	VMA	20 A4C	20 VA	20 A4E	35	-	6	184				
	MATCU-71				2	-	8	54				
	MAG-42	1 C-117	1 VRM									
	H&MS-42	3 T1A	3 VTBJ		16	-	18	372				
	MABS-42				6	-	16	452				
	VMF	15 F8D	15 VF-FB		26	-	6	172				
	VMA	20 A4C	20 VA	20 A4E	35	-	6	184				
	VMA	20 A4C	20 VA	20 A4E	35	-	6	184				
	MATCU-72				2	-	8	54				
	MAG-43	1 C-117	1 VRM									
	H&MS-43	3 T1A	3 VTBJ		16	-	18	372				
	MABS-43				6	-	16	452				
	VMF	15 F8D	15 VF-FB		26	-	6	172				
	VMF	15 F8D	15 VF-FB		26	-	6	172				
	VMA	20 A4C	20 VA	20 A4E	35	-	6	184				
	MACS-17				6	-	22	202				
	MATCU-73				2	-	8	54				
	MAG-46											
	H&MS-46	1 C-117	1 VRM		16	-	20	447				
	MABS-46				10	-	20	594				
	VMO-4	24 OH43D	24 H-L	12 UH1E	48	-	4	142				
				18 OV-10A					#12	-	#1	#50
	HMM-768	24 UH34D	24 H-M		60	-	5	180				
	HMM-770	24 UH34D	24 H-M		60	-	5	180				
	HMM-772	7 UH34D	24 H-M		60	-	5	180				
	HMM-776		24 H-M		60	-	5	180				
	HMM-777		24 H-M		60	-	5	180				
	HMH-464	21 CH37C	24 H-H		60	-	5	191				
	MATCU-76				2	-	8	54				
	PERSONNEL REQUIRED (4TH MAW)				930	1	532	9979	#28	#16	#2	#122
	AUGMENT 3 IN-BEING WINGS)				359	113	244	930				
	AGGREGATE				1289	114	776	10,909				

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## 4TH MARINE AIRCRAFT WING REQUIREMENTS/OBJECTIVES - M-DAY FY 71

LINE	4th Marine Aircraft Wing	AIRCRAFT			T. O.				PERSONNEL OBJECTIVE			
		Available	Authorized	Objective	NA	NAO	AG	ENL	NA	NAG	AG	ENL
	MWEG-4											
	H&HS-4				42	1	83	651				
	MASS-4				9	-	24	140				
	MACS-23				6	-	22	223				
	MACS-24				6	-	22	223				
	4th LAAM BN				-	-	36	621				
	VMJ/VMCJ-4		9 VEP 9 VAQM	9 RF8A	16	-	6	118				
	MWSG-47											
	H&HS-47				8	-	28	321				
	MABS-47				5	-	15	492				
	MAMS-47		2 VRH	2 C-54	8	-	6	204				
			2 VRM	2 C-117								
			3 VTBJ	3 TA4E								
	MARTSAT-4				1	-	2	38				
	VMR-234		15 VRH	15 C-119	45	-	2	248				
	VMW-4											
	MAG-41		1 VRM	1 C-117								
	H&MS-41		3 VTBJ	3 TA4E	16	-	18	372				
	MABS-41				6	-	16	452				
	VMF		15 VF-FB	15 F8C	26	-	6	164				
	VMF		15 VF-FB	15 F8D	26	-	6	172				
	VMA		20 VA	20 A4E	35	-	6	184				
	MATCU-71				2	-	8	54				
	MAG-42		1 VRM	1 C-117								
	H&MS-42		3 VTBJ	3 TA4E	16	-	18	372				
	MABS-42				6	-	16	452				
	VMF		15 VF-FB	15 F8D	26	-	6	172				
	VMA		20 VA	20 A4E	35	-	6	184				
	VMA		20 VA	20 A4E	35	-	6	184				
	MATCU-72				2	-	8	54				
	MAG-43		1 VRM	1 C-117								
	H&MS-43		3 VTBJ	3 TA4E	16	-	18	372				
	MABS-43				6	-	16	452				
	VMF		15 VF-FB	15 F8D	26	-	6	172				
	VMF		15 VF-FB	15 F8D	26	-	6	172				
	VMA		20 VA	20 A4E	35	-	6	184				
	MACS-17				6	-	22	223				
	MATCU-73				2	-	8	54				
	MAG-46											
	H&MS-46		1 VRM	1 C-117	16	-	20	447				
	MABS-46				10	-	20	594				
	VMO-4		24 H-L	12 UH-1E								
				18 OV-10A	60	-	5	192				
	HMM-768		24 H-M	24 UH34D	60	-	5	180				
	HMM-770		24 H-M	24 UH34D	60	-	5	180				
	HMM-772		24 H-M	24 UH34D	60	-	5	180				
	HMM-776		24 H-M	24 UH34D	60	-	5	180				
	HMM-777		24 H-M	24 UH34D	60	-	5	180				
	HMH-464		24 H-H	24 CH37	60	-	5	191				
	MATCU-76				2	-	8	54				
	PERSONNEL REQUIRED 4TH MAW)				942	1	533	10100				

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## 4TH MARINE AIRCRAFT WING REQUIREMENT/OBJECTIVES - M-DAY FY 72

LINE	4th Marine Aircraft Wing	AIRCRAFT			T. O.				PERSONNEL OBJECTIVE			
		Available	Authorized	Objective	NA	NAO	AG	ENL	NA	NAO	AG	ENL
	MWHG-4											
	H&HS-4				42	1	83	651				
	MASS-4				9	-	24	140				
	MACS-23				6	-	22	223				
	MACS-24				6	-	22	223				
	4th LAAM BN				-	-	36	621				
	VMJ/VMCJ-4		9 VFP	9 RF8A	16	-	6	118				
			9 VAQM									
	MWSG-47											
	H&HS-47				8	-	28	321				
	MABS-47				5	-	15	492				
	MAMS-47		2 VRH	3 C-130	8	-	6	204				
			2 VRM									
			3 VTBJ	3 TA4E								
	MARTSAT-4				1	-	2	38				
	VMR-234		15 VRH	18 KC-130	72	-	4	400				
	VMW-4											
	MAG-41		1 VRM	1 C-130								
	H&MS-41		3 VTBJ	3 TA4E	16	-	18	372				
	MABS-41				6	-	16	452				
	VMF		15 VF-FB	15 F8D	26	-	6	172				
	VMF		15 VF-FB	15 F8E	26	-	6	172				
	VMA		20 VA	20 A4E	35	-	6	184				
	MATCU-71				2	-	8	54				
	MAG-42		1 VRM	1 C-130								
	H&MS-42		3 VTBJ	3 TA4E	16	-	18	372				
	MABS-42				6	-	16	452				
	VMF		15 VF-FB	15 F8E	26	-	6	172				
	VMA		20 VA	20 A4E	35	-	6	184				
	VMA		20 VA	20 A4E	35	-	6	184				
	MATCU-72				2	-	8	54				
	MAG-43		1 VRM	1 C-130								
	H&MS-43		3 VTBJ	3 TA4E	16	-	18	372				
	MABS-43				6	-	16	452				
	VMF		15 VF-FB	15 F4B	26	26	6	273				
	VMF		15 VF-FB	15 F4B	26	26	6	273				
	VMA		20 VA	15 A6A	26	26	6	312				
	MACS-17				6	-	22	223				
	MATCU-72				2	-	8	54				
	MAG-46											
	H&MS-46		1 VRM	1 C-130	16	-	20	447				
	MABS-46				10	-	20	594				
	VMO-4		24 H-L	12 UH1E								
				18 OV-10A	60	-	5	192				
	HMM-768		24 H-M	24 CH46A	60	-	5	181				
	HMM-770		24 H-M	24 CH46A	60	-	5	181				
	HMM-772		24 H-M	24 UH34D	60	-	5	180				
	HMM-776		24 H-M	24 UH34D	60	-	5	180				
	HMM-777		24 H-M	24 UH34D	60	-	5	180				
	HMH-464		24 H-H	24 CH37	60	-	5	191				
	MATCU-76				2	-	8	54				
	PERSONNEL REQUIRED (4th MAW))				960	72	533	10594				

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## 4TH MARINE AIRCRAFT WING REQUIREMENTS/OBJECTIVES - M-DAY FY 73

LINE	4th Marine Aircraft Wing	AIRCRAFT			T.O.							
		Available	Authorized	Objective	NA	NAO	AG	ENL	NA	NAO	AG	ENL
	MWHG-4											
	H&HS-4				42	1	83	651				
	MASS-4				9	-	24	140				
	MACS-23				6	-	22	223				
	MACS-24				6	-	22	223				
	4th LAAM BN				-	-	36	621				
	VMJ/VMCJ-4		9 VFB	9 RF4E								
			9 VAQM	9 EA6A	32	32	7	390				
	MWSG-47											
	H&HS-47				8	-	28	321				
	MABS-47				5	-	15	492				
	MAMS-47		2 VRH	3 C-130	8	-	6	204				
			2 VRM									
			3 VTBJ	3 TA4E								
	MARTSAT-4				1	-	2	38				
	VMR-234		15 VRH	18 KC-130	72	-	4	400				
	VMW-4			9 E2A	32	32	6	246				
	MAG-41		1 VRM	1 C-130								
	H&MS-41		3 VTBJ	3 TA4E	16	-	18	372				
	MABS-41				6	-	16	452				
	VMF		15 VF-FB	15 F8E	26	-	6	172				
	VMF		15 VF-FB	15 F4B	26	26	6	273				
	VMA		20 VA	20 A4E	35	-	6	184				
	MATCU-71				2	-	8	54				
	MAG-42		1 VRM	1 C-130								
	H&MS-42		3 VTBJ	3 TA4E	16	-	18	372				
	MABS-42				6	-	16	452				
	VMF		15 VF-FB	15 F4B	26	26	6	273				
	VMA		20 VA	20 A4E	35	-	6	184				
	VMA		20 VA	15 A6A	26	26	6	312				
	MATCU-72				2	-	8	54				
	MAG-43		1 VRM	1 C-130								
	H&MS-43		3 VTBJ	3 TA4E	16	-	18	372				
	MABS-43				6	-	16	452				
	VMF		15 VF-FB	15 F4B	26	26	6	273				
	VMF		15 VF-FB	15 F4B	26	26	6	273				
	VMA		20 VA	15 A6A	26	26	6	312				
	MACS-17				6	-	22	223				
	MATCU-73				2	-	8	54				
	MAG-46											
	H&MS-46		1 VRM	1 C-130	18	-	20	447				
	MABS-46				10	-	20	594				
	VMO-4		24 H-L	12 UH1E								
				18 OV-10A	80	-	5	192				
	HMM-788		24 H-M	24 CH46A	80	-	5	181				
	HMM-770		24 H-M	24 CH46A	80	-	5	181				
	HMM-772		24 H-M	24 CH46A	80	-	5	181				
	HMM-776		24 H-M	24 CH46A	80	-	5	181				
	HMM-777		24 H-M	24 UH34D	80	-	5	180				
	HMH-464		24 H-H	19 CH53A	60	-	5	191				
	MATCU-78				2	-	8	54				
	(PERSONNEL REQUIRED(4TH MAW))				999	221	540	11444				



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## 4TH MARINE AIRCRAFT WING REQUIREMENTS/OBJECTIVES - M-DAY FY 74

LINE	4th Marine Aircraft Wing	AIRCRAFT			T.O				PERSONNEL OBJECTIVE			
		Available	Authorized	Objective	NA	NAO	AG	ENL	NA	NAO	AG	ENL
	MWHG-4											
	H&HS-4				42	1	83	651				
	MASS-4				9	-	24	140				
	MACS-23				6	-	22	223				
	MACS-24				6	-	22	223				
	4th LAAM BN				-	-	38	621				
	VMI/VMCJ-4		9 VFP	9 RF4B								
			9 VAQM	9 EA6A	32	32	7	390				
	MWSG-47											
	H&HS-47				8	-	28	321				
	MABS-47				5	-	15	492				
	MAMS-47		2 VRH	3 C-130	8	-	6	204				
			2 VRM									
			3 VTBJ	3 TA4E								
	MARTSAT-4				1	-	2	38				
	VMR-234		15 VRH	18 KC130	72	-	4	400				
	VMW-4			9 F2A	32	32	8	246				
	MAG-41		1 VRM	1 C-130								
	H&MS-41		3 VTBJ	3 TA4E	16	-	18	372				
	MABS-41				6	-	16	452				
	VMF		15 VF-FB	15 F4B	26	26	6	273				
	VMF		15 VF-FB	15 F4B	26	26	6	273				
	VMA		20 VA	20 A4E	35	-	6	184				
	MATCU-71				2	-	8	54				
	MAG-42		1 VRM	1 C-130								
	H&MS-42		3 VTBJ	3 TA4E	16	-	18	372				
	MABS-42				6	-	16	452				
	VMF		15 VF-FB	15 F4B	26	26	6	273				
	VMA		20 VA	20 A4E	35	-	6	184				
	VMA		20 VA	15 A6A	26	26	6	312				
	MATCU-72				2	-	8	54				
	MAG-43		1 VRM	1 C-130								
	H&MS-43		3 VTBJ	3 TA4E	16	-	18	372				
	MABS-43				6	-	16	452				
	VMF		15 VF-FB	15 F4B	26	26	6	273				
	VMF		15 VF-FB	15 F4B	26	26	6	273				
	VMA		20 VA	15 A6A	26	26	6	312				
	MACS-17				6	-	22	223				
	MATCU-73				2	-	8	54				
	MAG-46											
	H&MS-46		1 VRM	1 C-130	16	-	20	447				
	MABS-46				10	-	20	594				
	VMO-4		24 H-L	12 UH1E								
				18 OV-10A	60	-	5	182				
	HMM-768		24 H-M	24 CH46	60	-	5	181				
	HMM-770		24 H-M	24 CH46	60	-	5	181				
	HMM-772		24 H-M	24 CH46	60	-	5	181				
	HMM-776		24 H-M	24 CH46	60	-	5	181				
	HMM-777		24 H-M	24 CH46	60	-	5	181				
	FMH-464		24 H-H	24 CH53	60	-	5	191				
	MATCU-76				2	-	8	54				
	(PERSONNEL REQUIRED (4TH MAW))				999	247	540	11546				

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## 4TH MARINE AIRCRAFT WING REQUIREMENTS/OBJECTIVES - M-DAY FY 75

LINE	4th Marine Aircraft Wing	AIRCRAFT			T. O.				PERSONNEL OBJECTIVE			
		Available	Authorized	Objective	NA	NAO	AG	ENL	NA	NAO	AG	ENL
	MWHG-4											
	H&HS-4				42	1	83	651				
	MASS-4				9	-	24	140				
	MACS-23				8	-	22	223				
	MACS-24				8	-	22	223				
	4th LAAM BN				-	-	36	621				
	VMJ/VMCJ-4		9 VFP	9 RF4B								
			9 VAQM	9 EA6A	32	32	7	390				
	MWSG-47											
	H&HS-47				8	-	28	321				
	MABS-47				5	-	15	492				
	MAMS-47		2 VRH	3 C-130	8	-	6	204				
			2 VRM									
			3 VTBJ	3 TA4E								
	MARTSAT-4				1	-	2	38				
	VMR-234		15 VRH	18 KC-130	72	-	4	400				
	VMW-4			9 E2A	32	32	6	248				
	MAG-41		1 VRM	1 C-130								
	H&MS-41		3 VTBJ	3 TA4E	16	-	18	372				
	MABS-41				6	-	16	452				
	VMF		15 VF-FB	15 F4B	26	26	6	273				
	VMF		15 VF-FB	15 F4B	26	26	6	273				
	VMA		20 VA	20 A7A	35	-	6	285				
	MATCU-71				2	-	8	54				
	MAG-42		1 VRM	1 C-130								
	H&MS-42		3 VTBJ	3 TA4E	16	-	18	372				
	MABS-42				6	-	16	452				
	VMF		15 VF-FB	15 F4B	26	26	6	273				
	VMA		20 VA	20 A7A	35	-	6	285				
	VMA		20 VA	15 A6A	26	26	6	312				
	MATCU-72				2	-	8	54				
	MAG-43		1 VRM	1 C-130								
	H&MS-43		3 VTBJ	3 TA4E	16	-	18	372				
	MABS-43				6	-	16	452				
	VMF		15 VF-FB	15 F4B	26	26	6	273				
	VMF		15 VF-FB	15 F4B	26	26	6	273				
	VMA		20 VA	15 A6A	26	26	6	312				
	MACS-17				6	-	22	223				
	MATCU-73				2	-	8	54				
	MAG-46											
	H&MS-46		1 VRM	1 C-130	18	-	20	447				
	MABS-46				10	-	20	594				
	VMO-4		24 H-L	12 JH-1E								
				18 OV10A	60	-	5	192				
	HMM-768		24 H-M	24 CH46	60	-	5	181				
	HMM-770		24 H-M	24 CH46	60	-	5	181				
	HMM-772		24 H-M	24 CH46	60	-	5	181				
	HMM-776		24 H-M	24 CH46	60	-	5	181				
	HMM-777		24 H-M	24 CH46	60	-	5	181				
	HMH-464		24 H-H	24 CH53	60	-	5	191				
	MATCU-76				2	-	8	54				
	PERSONNEL REQUIRED (4TH MAW)				988	247	540	11748				

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### AVIATION PERSONNEL BY FUNCTIONAL CATEGORY

ELEMENT #	ACTIVITY/FUNCTIONAL CATEGORY	FY 1966				FY 1967				FY 1968				FY 1969				FY 1970			
		OFF	(NA)	(NAO)	(AG)	ENL	OFF	(NA)	(NAO)	(AG)	ENL	OFF	(NA)	(NAO)	(AG)	ENL	OFF	(NA)	(NAO)	(AG)	ENL
328-15013	LAAM BATTALIONS-HAWK	109	-	-	(109)	1824	109	-	-	(109)	1932	109	-	-	(109)	1932	109	-	-	(109)	1932
328-40013	MARINE AIRCRAFT WINGS	3988 (2389)		(324)	(1275)	29094	4056 (2358)		(429)	(1269)	29738	4087 (2364)		(480)	(1243)	29573	4073 (2360)		(476)	(1237)	30004
328-41013	MCAS and MCAF	415 (126)		(1)	(288)	3302	415 (126)		(1)	(288)	3302	415 (126)		(1)	(288)	3302	415 (126)		(1)	(288)	3302
328-45013	HQ FMFS	154 (119)	-		(35)	587	162 (127)	-		(35)	729	162 (127)	-		(35)	729	162 (127)	-		(35)	729
520-15013	HQ-COMDSET-MARCORRES	130 (78)	-		(52)	1539	130 (78)	-		(52)	1539	130 (78)	-		(52)	1539	130 (78)	-		(52)	1539
706-04013	TECHNICAL TRAINING AIR	78 (27)	(4)		(47)	2758	78 (27)	(4)		(47)	2762	78 (27)	(4)		(47)	2760	78 (27)	(4)		(47)	2755
706-05013	TECH TRAINING OTHER	14 (12)	-		(2)	108	14 (12)	-		(2)	108	14 (12)	-		(2)	108	14 (12)	-		(2)	108
706-06013	PROFESSIONAL TRAINING	226 (226)	-		-	2	226 (226)	-		-	2	226 (226)	-		-	2	226 (226)	-		-	2
706-08013	FLIGHT TRAINING	365 (362)	-		(3)	219	365 (362)	-		(3)	242	365 (362)	-		(3)	328	365 (362)	-		(3)	282
706-12013	HQ COMMAND SUPPORT	79 (59)	(2)		(18)	456	79 (59)	(2)		(18)	456	79 (59)	(2)		(18)	456	79 (59)	(2)		(18)	456
712-18012	ATTACHES	14 (14)	-		-	4	14 (14)	-		-	4	14 (14)	-		-	4	14 (14)	-		-	4
754-60013	COMMAND-DIRECTION	147 (136)	-		(11)	118	147 (136)	-		(11)	118	147 (136)	-		(11)	118	147 (136)	-		(11)	118
754-62013	RECRUITING-EXAMINING	22 (22)	-		-	1	22 (22)	-		-	1	22 (22)	-		-	1	22 (22)	-		-	1
754-82013	OTHER SUPPORT ACTIVITIES	68 (63)	(1)		(4)	263	68 (63)	(1)		(4)	263	68 (63)	(1)		(4)	263	68 (63)	(1)		(4)	263
774-98903	MC PERS ASGD OSD/JCS	15 (15)	-		-	-	15 (15)	-		-	-	15 (15)	-		-	-	15 (15)	-		-	-
19	MISCELLANEOUS ELEMENTS	111 (97)	(2)		(12)	80	111 (97)	(2)		(12)	80	111 (97)	(2)		(12)	80	111 (97)	(2)		(12)	80
754-74013	TRANS. PAT. PRIS	440 (290)	(23)		(127)	2759	445 (289)	(30)		(126)	2822	447 (289)	(34)		(124)	2817	446 (289)	(33)		(124)	2841
	AGGREGATE	6875 (4535)	(357)		(1983)	43114	6956 (4511)	(469)		(1976)	44098	6989 (4517)	(524)		(1943)	44012	6974 (4513)	(519)		(1942)	44419
II-II-3-1																					
																		Appendix 3 to Chapter III, Part II		CONFIDENTIAL	

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PART II  
CHAPTER IV

AVIATION TRAINING SUB-PROGRAM, FY 65-75

400. Description

1. The aviation training sub-program is completely responsive to all of the other aviation sub-programs. It reflects and sets forth the aviation peculiar training necessary to provide the requisite number of aviation skills to man the authorized FMF structure, to support the operation of facilities and to accomplish equipment maintenance. As such it is essentially concerned with individual, unit and special aviation training requirements. These various aspects extend to formal technical schooling, postgraduate schooling, utilization of training devices, special factory training, pilot and aircraft flight training, unit operational training fleet competitions and unit training exercises.

401. Objectives

1. To direct all aviation training toward achieving and maintaining the highest possible level of combat readiness for units and individuals and to insure that both Regular and Reserve components maintain a capability of carrying out the aviation mission.

402. Aircrew Training

1. Pilot training flow is depicted in Chart #1 of Appendix 1 to this chapter. The annual average training requirement for newly designated aviators during FY 65 through FY 70 is 431. The rotary/fixed wing pilot training distribution within the Training Command is 59% rotary/41% fixed which corresponds directly to the projected FMF aircraft seat requirement.

2. NAO training flow is depicted in Chart #2 of Appendix 1 to this chapter. The requirement for NAO's increase from 223 in FY 65 to 543 in FY 70.

3. Navigator and Airborne Radio Operator training is conducted at the Airborne Operators School at MCAS, Cherry Point. The annual training rates are 18 for navigators and 15 for radio operators. These training rates will remain reasonably stable through FY 69.

4. Unit operational training is a continual phasing program designed to prepare units for deployment. Integrated in this phase training are the Air/Ground exercise requirements which will be conducted in accordance with FMFLANT and AIRFMFPAC Training and Readiness Manual.

5. Weapon Systems Trainer requirements are submitted to CNO for each new aircraft and their delivery schedules will be promulgated in the training plan for each particular aircraft. When budgetary limitations preclude procurement of WST's for Marine Corps sites, this portion of aircrew training will be provided at Navy or Air Force sites and the training schedules will be promulgated in specific aircraft training plans. Chart #3 of Appendix 1 to this chapter lists the current and projected WST's located at Marine Corps facilities.

#### 403. Technical Training

1. Technical training consists of formal schools, factory training, training by Naval Air Maintenance Training Detachments and unit on-the-job training. All technical training is oriented toward providing personnel qualified in the aviation peculiar skills required by aviation units.

2. Formal aviation technical schools conducted by the Naval Air Technical Training Command are the primary source for aviation skill training. It is intended that all accessions to the aviation skill structure will receive formal schooling prior to the assignment of an aviation MOS. Once an aviation MOS is assigned, it is intended that individuals remain in that skill unless retraining action is directed from HQMC. HQMC will plan training programs, and retraining programs if necessary, to maintain the aviation skill structure at the required strength. In recent years the career level aviation skill structure has been declining in the face of increasing career level technician requirements.

Since the normal input source of aviation skills is at the recruit level, it is imperative that the highest retention rate possible be achieved in order to provide the essential career level technicians.

3. Factory training will normally be conducted in support of new aircraft and equipment introductions when an appropriate NAMT is not available. Factory training conferences will be conducted for this purpose.

4. Naval Air Maintenance Training Detachments are designed to provide all of the special training necessary to ensure that technicians will be qualified to perform maintenance on specific aircraft, systems and associated equipment. Once an NAMT is available further factory training should not be required. Should a deficiency in the training provided by an NAMT develop, HQMC should be advised for appropriate action. HQMC will submit requirements for NAMT's for all new aircraft introductions. Chart #3 of Appendix 1 to this chapter lists the current and projected NAMT's located at Marine Corps facilities.

5. Unit on-the-job training will be conducted to further enhance the technical skill of assigned personnel. In view of the existing career technician shortage a forceful program of this nature is essential.

#### 404. Reserve Forces Training

##### 1. Description:

The Organized Marine Air Reserve Training will normally be accomplished during the annual 48 scheduled drills (12 weekends) and the annual 14 days Active Duty Training. The Marine Air Reserve Training Command will consist of 80 Organized Reserve Units assigned to 17 Marine Air Reserve Training Detachments and 48 Sub Units.

##### 2. Objectives:

To insure that the aviation elements of the Marine Corps Reserve are, within the limits of available facilities, funds and equipment responsive to the mobilization requirements of the regular establishment.

##### 3. Unit Training:

- a. The training emphasis will be on providing unit training

for tactical squadrons, designated to activate the 4th MAW, paralleling training of like FMF units. Operational Readiness Inspections of these units will be conducted by FMF personnel during Active Duty Training (ADT).

b. Service Support and Administrative type elements of the 4th MAW will be maintained in the drill pay reserve at reduced manning levels until expansion to T/O strength is possible through increase in authorized manpower ceilings. These unit cadres will be exercised at ADT through integrated on-the-job training with counterparts of the regular establishment.

#### 4. Individual Training:

##### a. Pilot Training

(1) With an inventory of modern high performance aircraft and the mission to provide trained units for a 4th MAW, the flight training program will seek to provide 150 flight hours per year in the VMF/VMA/HMR/VMO categories and 200 flight hours in the VMR category.

(2) Flight syllabus training will be conducted during normal drill periods and at annual summer active duty training. Total flight training objectives cannot be accomplished during these periods, therefore, additional flight training periods and pilot proficiency tours will be made available.

(3) 100 organized aviation reserve officers will be ordered to 14 day formal schools each year for the following:

(a) Reserve Junior and Senior Schools at Camp Pendleton and Quantico for staff and command function training required of unit commanders and staff officers.

(b) Naval Air Maintenance Training Courses (NAMT) for aircraft systems training; Operational Flight Trainer Courses (OFT) for pilot operating procedures; and pilot familiarization and standardization courses will be utilized to transition pilots into new high performance aircraft as they are assigned to the Marine Air Reserve Training Command.

(4) Class III Volunteer Reserve helicopter and transport pilots may be offered two week refresher flight training tours with FMF units. These billets are included in Pag Group "D" billets.

b. Other Officer Training

(1) Ground officers of organized air reserve units will receive on-the-job training in their individual specialties during the 48 drill periods and the annual active duty for training period.

(2) Volunteer reserve officers who are required in the initial phases of mobilization will be assigned to two week formal school tours in staff functioning at Reserve Junior and Senior Schools; to applicatory staff functioning through two week active duty for training periods as members of Provisional Air Groups and as staff members of Air-Ground Task Forces; to on-the-job training at Marine Corps Air Stations with Marine Aircraft Wings.

c. Enlisted Training, Class II Organized Reserve

(1) On-the-job training and classroom instruction will be provided the Pay Group "A" enlisted personnel during the scheduled 48 drill periods and the annual 15 days active duty for training.

(2) Aviation six-month trainees will be assigned to recruit training at the start of their six-months active duty for training. Upon completion of recruit training, all trainees will receive two weeks of aptitude screening and aviation fundamentals training. Those trainees having a mechanical aptitude are retained for an additional four weeks of mechanical fundamentals training. Dependent upon the training time and facilities available, the trainees with aptitudes other than mechanical are assigned to formal schools or on-the-job training in those MOS fields in which they are best suited and which are required upon mobilization.



(3) Formal schooling at Class "A" technical schools and Naval Maintenance Training Units will be utilized to provide the six-month trainees with the necessary technical background to enable them to qualify for a primary MOS in the more technical fields. Such training will also be provided the prior service enlisted personnel to keep them abreast of new equipment as it is introduced into the program. Man-week requirements for this program by fiscal year are listed as critical skill tours.

(4) Involuntary tours provide for the enforcement of the Federal Law which establishes participation requirements for remaining six-month enlistees with obligated service.

d. Enlisted Training Class III Volunteer Reserve

(1) Pay Group "D" training of two weeks duration is assigned MOS field for those personnel who are not members of organized reserve units but who are required in the first 30 days of mobilization.

(2) Mandatory training (Pay Group "E" 30 days) for six-month trainees with obligated service who are unable to belong to organized units.

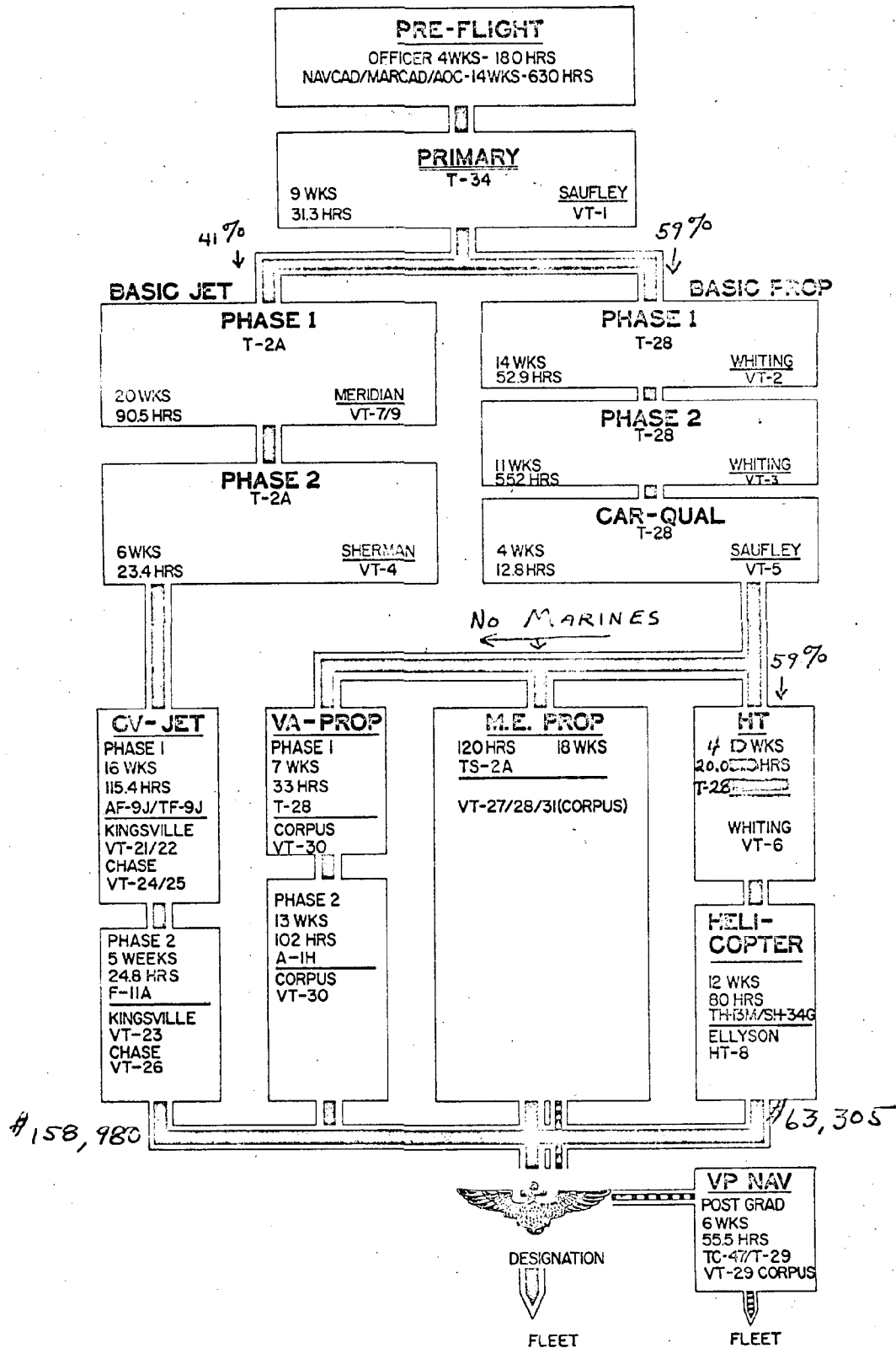
(3) Involuntary tours are for the purpose of assigning mandatory Class III enlisted with obligated service remaining to up to 45 days training in event the individual concerned will not accept 30 day Pay Group "E" orders to active duty training.

5. Cost Summary:

a. Marine Corps support of aviation reserve training is contained in Activity of Appropriation RPMC and Activity 4 of Appropriation O&M, ML. Details are contained in the Marine Corps Reserve Manpower Program.

b. Navy support of Marine Aviation Reserve training in the form of aircraft and supporting equipment, fuel, base facilities is contained in BuWeps budgets.

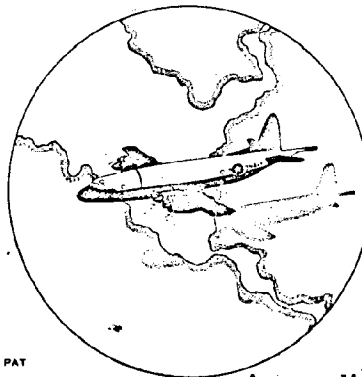
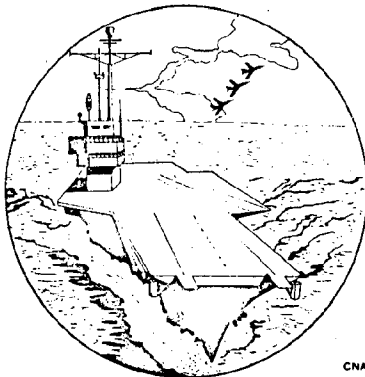
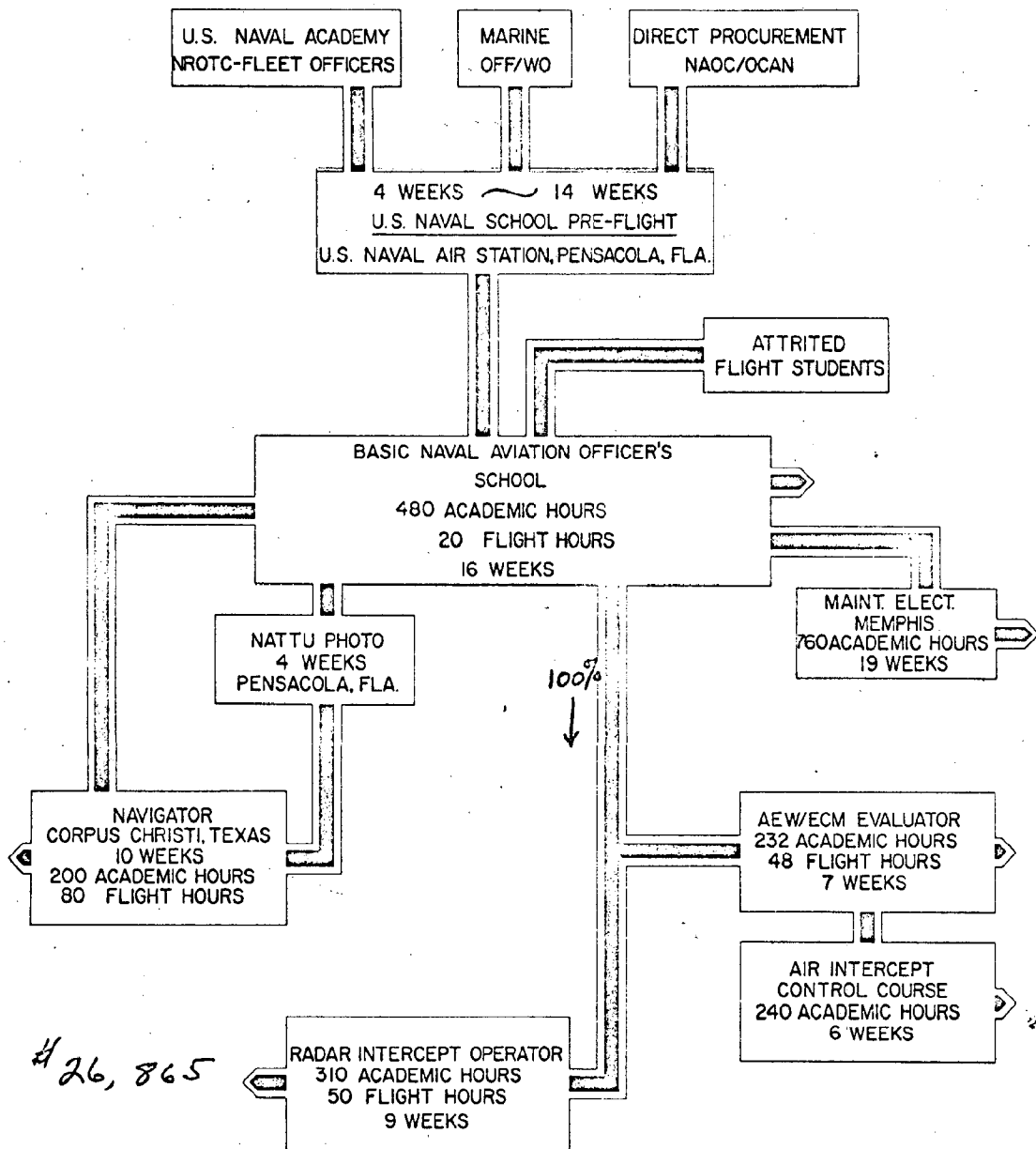
## PILOT TRAINING FLOW



CHATRA P-65 (Rev. 8-84) PAT

CHART #1  
Appendix I to Chapter IV

## NAVAL AVIATION OBSERVER PROGRAM.



CNATRA P-72 (Rev. 9-64) PAT

CHART #2  
Appendix I to Chapter IV

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	65	66	67	68	69	70
<b>CHEERY POINT</b>						
F4B NANT						
F4E WST						
A4C/E NANT						
A6A WST						
C-130B OFT "B" St.						
<b>BEAUFORT</b>						
F3C/D NANT						
F3C WST						
F4B COT & 15C4						
A4E WST						
A7A WST						
A7A NANT						
<b>EL TORO</b>						
TF-9J NANT "B" St.						
TF-9J OFT "B" St.						
F3 A/C/D/E NANT						
F3C WST						
F4B NANT						
F4B WST						
MF4B NANT Pnl.						
A4C/E NANT						
A4C WST						
A7A COT & 15C4						
EC-130F NANT						
EC-130F WST						
<b>KANEQUE BAY</b>						
A4A/E NANT "B" St.						
A4B WST						
F3C/D WST						
F4B COT & 15C4						
A7 COT & 15C4						
<b>NEW RIVER</b>						
SH-34-J NANT "B" St.						
CH-46A NANT						
CH-46A WST						
CH-53A NANT Av Pnl						
<b>SANTA ANA</b>						
UH-34D NANT						
CH-46A NANT						
CH-46A WST						
CH-53A NANT						
CH-37C NANT "B" St.						
<b>PENDLETON</b>						
UH-1E NANT						
OY-10A NANT						

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	70	71	72	73	74	75
CHERRY POINT						
F4B NANT						
F4B WST						
A4C/E NANT						
A6A WST						
C-130B OFT "B" St.						
BEAUFORT						
F8C/D NANT						
F8C WST						
F4B COT & 15C4						
A4E WST						
A7A WST						
A7A NANT						
EL TORO						
TF-9J NANT "B" St.						
TF-9J OFT "B" St.						
F8A/CD'E NANT						
F8C WST						
F4B NANT						
F4B WST						
RF4B NANT Pnls.						
A4C/E NANT						
A4C WST						
A7A COT & 15C4						
KC-130F NANT						
KC-130F WST						
KANEHOE BAY						
A4A/B NANT "B" St.						
A4B WST						
F8C/D WST						
F4B COT & 15C4						
A7 COT & 15C4						
NEW RIVER						
SH-34-J NANT "B" St.						
CH-46A NANT						
CH-46A WST						
CH-53A NANT Av.Pnl						
SANTA ANA						
UH-1H NANT						
CH-46A NANT						
CH-46A WST						
CH-53A NANT						
CH-37C NANT "B" St.						
PENDLETON						
UH-1E NANT						
OV-10A NANT						

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CHART 13  
APPENDIX I TO CHAPTER IV

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## PART II

## CHAPTER V

AVIATION MATERIAL1. PROGRAM DESCRIPTION

The purpose of this program is to provide effective material support to Marine aviation. It encompasses major item procurement of aircraft, weapons and support equipment. The guidance expressed herein identifies the goals and salient features of a logistic concept for support of tactical air operations. Commands, ~~bureaus~~ and offices should be guided by these principles and objectives in the development of support plans, material programs, budgets and management systems that support Marine aviation.

2. OBJECTIVE

The primary objective of this program is to achieve and maintain the highest possible level of logistic readiness for support of Marine Corps aviation in garrison, deployed, or in combat operations. This will be accomplished through planning and programming for new and continuing requirements, and evaluating material performance, effectiveness, and utilization.

3. LOGISTICAL CONCEPT

A logistical concept for support of Marine Corps tactical air operations is hereby provided:

a. Logistic support systems and techniques must complement and respond to all combat employment methods required to carry out the primary operational mission. There are five basic facts that identify the required capabilities and characteristics of the Marine Corps aviation logistic support system:

(1) Marine Corps aviation units are an integral part of the Air/Ground Team and required for the air support of MEF, MEB and MEU combat operations.

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(2) The Composite Marine Aircraft Group is the smallest tactical unit that can provide the Marine rifleman with the following required types of air support, including their command and control:

Offensive Air Support

Anti-Air Warfare

Assault Support

Aerial Reconnaissance

(3) Operationally and logistically, the Composite Marine Aircraft Group is the equivalent of the Navy attack aircraft carrier.

(4) The requirement to operate from both land bases and aircraft carriers during an amphibious operation generates logistical considerations peculiar to Marine Corps aviation units.

(5) The Marine Corps aviation logistic system must have the inherent flexibility to provide incremental introduction of essential support into advanced bases to maintain adequate air capability in the objective area.

b. To provide logistic guidance in responding to the above listed facts and conditions, the following procedures and requirements are affirmed:

(1) The logistic system must be capable of incremental introduction of supply and support into the objective area at a rate consistent with the tactical build-up, airfield site development, operational tempo, enemy capabilities; and proximity, support capability, and response time of rear area bases. A typical phasing will be: (see attached chart)

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# INCREMENTAL INTRODUCTION OF SUPPLY AND SUPPORT INTO OBJECTIVE AREAS

Type <del>or Phase</del> of Operation	Level of Service and Maintenance	Supply Support	SATS Phasing
Initial Advance Base Ops	Aircraft Servicing - Refueling, rearming and <del>emergency</del> <sup>FLIGHT LINE</sup> maintenance.	Squadron pack- up appropriate to operational tempo with direct logistic communication to parent Group	<sup>ONE</sup> Phase <del>Alpha</del> - Min <sup>MUM</sup> SATS
Advance Base Ops	Organizational Maintenance	Advance echelon of Group supply per- sonnel and support. Direct communication to Group rear eche- lon for response as required.	<sup>PHASE TWO</sup> Complete SATS <del>or Supplemented</del>
Composite Marine Aircraft Group Base	Intermediate Mainte- nance	Full Group supply support with direct, rapid communication to permanent support activity for routine replenishment by air.	<sup>PHASE THREE</sup> Expanded SATS <del>or</del> <del>normal airfield</del>
Marine Aircraft Wing Base Complex	Intermediate Mainte- nance; Complete Engine Repair	Further develop full Group supply support to include surface delivery means if appropriate for non- combat essential support.	<sup>PHASE FOUR</sup> <del>EXPEDITIONARY</del> AIRFIELD

CHART 1

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(a) Phase One - Initial advanced base for operational range extension and staging. Minimal numbers of personnel and equipment introduced to provide fueling, arming, and flight line maintenance for air operations.

(b) Phase Two - Sustained austere operations. Squadron level maintenance and support for expansion of air operations.

(c) Phase Three - ~~Continuous normal~~ <sup>EXPANDED AIR</sup> operations. Group level maintenance and support to permit performance of all Marine Air Group functions, ~~FOR A PERIOD UP TO 90 DAYS.~~

(2) In addition to providing combat support in an expeditionary environment, the Marine Corps aviation logistics system must maintain a satisfactory readiness posture while providing in garrison training support. To achieve this objective and be prepared to implement incremental introduction of logistic support into combat, support and supply must be organized, staffed, and equipped to operate in echelon, dispersed, or as a whole with priority accommodation to combat essential requirements. Quantities of supply and support must be sufficient to sustain a total commitment of Marine Aircraft Wing tactical resources operationally phased into combat and dispersed according to the dictates of the situation. The system must be: Flexible in the ability to provide measured and appropriate response to any required scale of effort and enemy reaction; mobile in the ability to traverse oceanic distances and fight upon arrival at the objective; responsive in all aspects to any contingency within hours from the order to execute; and effective in that the requisite support will be available and replenished in the objective area to carry out the total mission requirement.

(3) Ideally, the aircraft provided for operations in an expeditionary field environment and from an aircraft carrier should possess the following technical characteristics:

(a) Self-starting without external electrical power or compressed air.

(b) Basic aircraft systems should be designed for a high degree of reliability.

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(c) Easily maintained under expeditionary field conditions with a minimum requirement for essential special support equipment.

(d) Be capable of being reserviced and rearmed with equipments designed for common use among all major Marine Corps aircraft types under field conditions.

5. (4) Support equipments related to the incremental introduction concept are of three categories and as required for: (1) Initial advance base operations; (2) Organizational maintenance; (3) Intermediate maintenance. In each instance, equipments should be capable of functioning under expeditionary conditions and be of minimum weight and cube. However, the most pressing requirement is the reduction to an absolute minimum of the number, weight and cube of equipments required for initial advance base operations. Commonality of equipments for common use among aircraft types is essential. Multi-purpose vehicles and support equipments within manageable limits of maintainability and supportability are essential. Programming is designed to reflect requirements and support to meet introduction dates of new aircraft and weapon systems and to replace that which has become overage and/or obsolete. Replacement items should provide significantly superior operational capability and versatility and reduce the number of items in use. Equipments must, insofar as practicable, have operational characteristics which make them suitable for use in either a nuclear or non-nuclear situation and to cope with a BW/CW environment. A reporting system of major support equipment to identify numbers, condition and adequacy is required to substantiate programming action.

(5) The effectiveness and efficiency of maintenance for aircraft and related equipment depends on the presence of four basic elements: (1) Adequate material means and facilities to perform the task; (2) Sufficient numbers of skilled personnel; (3) A support system responsive to maintenance needs; and (4) Command emphasis that produces properly motivated personnel in supply, maintenance and equipment operations. At the present time, maintenance of aircraft and aircraft related equipments can be improved by:

(a) Increasing the numbers of trained personnel, providing a greater stability in maintenance organizations, and improving the quality of training by continuous technical up-dating of school trained personnel, utilizing fully the NAMTRA Detachment concept.

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(b) Providing more suitable and efficient working conditions and equipments, including van concepts of packaging.

(c) Developing a more effective communication of maintenance and supply information through refinement of the Navy 3M System.

*Revised*  
3.6. <sup>7</sup>(6) Data processing and collection systems are urgently required to improve data forms, procedures and data flow to provide adequate feedback of existing system and equipment logistic support and performance information. For Marine Corps air units to carry out assigned missions, there is a requirement for modern garrison and combat inventory management maintenance effort, fiscal and logistical status reporting and control systems. The hardware to perform these tasks must be deployable as an integral part of the Wing and be sufficiently current within the state-of-the-art of such development to be capable of absorbing new or expanded requirements. Communication links and equipments must be capable of reaching deployed Groups, interrogating their reporting systems and collating total Wing position. The system must communicate with the Marine Corps, Navy, and Defense logistic systems.

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SECRET

## AIRCRAFT SUMMARY FYFS&amp;FP/PROGRAM OBJECTIVES 1967

6 MAY 1965

AIRCRAFT	FY-66	FY-67	FY-68	FY-69	FY-70	FY-71	FY-72	FY-73	FY-74	FY-75	FY-76
3 28 40 01 3											
<u>Marine Aircraft Wing</u>											
VF-FB F8D	45/45	-	-	-	-	-	-	-	-	-	-
F8E	30/30	30/30	-	-	-	-	-	-	-	-	-
F4B/J	150/150	195/195	225/225	225/225	225/225	225/225	225	225	225	225	225
VA-L A7A	-	-	40/40	60/60	80/80	100/100	120	120	120	80	60
A4E	140/140	140/140	80/80	60/60	40/40	20/20	-	-	-	-	-
A4C	40/40	-	-	-	-	-	-	-	-	-	-
VA-1(X)	-	-	-	-	-	-	-	-	-	40	60
VA-M A6A	36/36	60/60	72/72	72/90	72/90	72/90	90	75	54	30	18
VA-M(X)	-	-	-	-	-	-	-	15	36	60	72
*VM-M E-2A	-	-	-	-	-/9	-/18	27	27	27	27	27
VG KC-130E	-	-	-/2	-/6	-/11	-/14	18	18	18	18	18
KC-130F	36/36	36/36	36/36	36/36	36/36	36/36	36	36	36	36	36
H-H CH-53A	19/19	56/56	72/72	72/72	72/72	72/72	72	53	16	-	-
CH-37C	24/24	12/12	-	-	-	-	-	-	-	-	-
H-H(X)	-	-	-	-	-	-	-	19	56	72	72
H-M CH-46A	96/96	168/168	240/240	312/312	336/360	360/360	312	264	192	120	48
UH-34D	264/264	192/192	120/120	48/48	24/-	-	-	-	-	-	-
H-M(X)	-	-	-	-	-	-	48	96	168	240	312
H-L UH-1E	72/72	72/72	72/45	72/36	72/36	72/36	25	-	-	-	-
H-L(X)	-	-	-	-	-	-	11	36	36	36	36
VO-L OV-10A	-	-	-/27	-/54	-/54	-/54	54	54	54	27	-
VO-L(X)	-	-	-	-	-	-	-	-	-	27	54

\* Included dependent upon development of satisfactory overland capability. No budgetary implications to be considered.

3 28 40 95 3											
<u>Reconnaissance Squadrons</u>											
VA-QM EA6A	9/9	9/9	9/9	9/9	9/9	9/9	8	-	-	-	-
EA6B	-	-	-/4	-/14**	-/18	-/18	18	18	9	-	-
EF10B	18/18	12/18	6/14	3/4**	-	-	-	-	-	-	-
VA-QM(X)	-	-	-	-	-	-	1	9	18	27	27
VF-P RF-4B	15/15	27/27	27/27	27/27	27/27	27/27	27	12	-	-	-
RF-8A	12/12	-	-	-	-	-	-	-	-	-	-
VF-P(X)	-	-	-	-	-	-	-	15	27	27	27
TOTAL MAW Combat	1006/1006	1009/1015	999/1013	996/1053	993/1067	993/1079	1092	1092	1092	1092	1092

\*\* The objective is 18 EA6B and any change in delivery/procurement permitting the increased operating level will revise this to 18 EA6B & 9 EF10B.

5 10 34 10 3											
<u>Wing &amp; Aviation Support Units, MC Reserve</u>											
VO-L OV-10A	-	-	-	-	-/18	-/18	18	18	18	18	18
UH-1E	-	-	-/12	-/12	-/12	-/12	12	12	12	12	12
TOTAL	-	-	-/12	-/12	-/30	-/30	30	30	30	30	30

# Not included in any totals of aircraft.

DECLASSIFIED

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Appendix 1 to  
Chapter V, Part II

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6 MAY 1965

AIRCRAFT	FY-66	FY-67	FY-68	FY-69	FY-70	FY-71	FY-72	FY-73	FY-74	FY-75	FY-76
3 28 40 01 3											
MAW Support Aircraft Summary											
VRH C54	6/7	6/7	6/1	6/-	6/-	6/-	-	-	-	-	-
C130E	-	-	-/5	-/10	-/15	-/21	21	21	21	21	21
VRM C117D	16/21	16/21	16/21	16/15	16/8	16/-	-	-	-	-	-
C47	4/-	4/-	4/-	4/-	4/-	4/-	-	-	-	-	-
VTAJ T1A/T2A	25/25	25/25	25/2	25/-	25/-	24/-	-	-	-	-	-
TP9J	10/10	-	-	-	-	-	-	-	-	-	-
TA4E	1/1	11/11	11/34	11/36	11/36	11/35	27	20	-	-	-
VTAJ(X)	-	-	-	-	-	1/1	9	16	36	36	36
VTAP TC45J	-/2	-/2	-/1	-	-	-	-	-	-	-	-
BTAP(X)	-	-	-/1	-/2	-/2	-/2	2	2	2	2	2
VALP A1E	2/-	2/-	2/-	2/-	2/-	2/-	-	-	-	-	-
HC UR34D	2/2	2/2	2/2	2/2	2/2	2/2	2	2	2	2	2
TOTAL MAW Support A/C											
	66/68	66/68	66/67	66/65	66/63	66/61	61	61	61	61	61

AIRCRAFT	FY-66	FY-67	FY-68	FY-69	FY-70	FY-71	FY-72	FY-73	FY-74	FY-75	FY-76
3 28 41 01 3											
Marine Air Bases Summary											
VRH* C54	1/1	1/1	1/1	1/1	1/-	1/-	-	-	-	-	-
VRM* TC4B	-	-	-	-	-/2	-/2	2	2	2	2	2
C47	3/3	1/3	1/3	-	-	-	-	-	-	-	-
C117D	6/6	6/6	6/6	5/-	5/-	5/-	-	-	-	-	-
C119E	1/1	1/1	1/1	1/-	1/-	1/-	-	-	-	-	-
C4B	-	-	-	-/10	-/10	-/10	10	10	10	10	10
VUL U11A	2/2	2/2	1/2	1/-	1/-	-	-	-	-	-	-
VTBJ T33	11/2	11/-	11/-	10/-	8/-	8/-	-	-	-	-	-
T1A/T2A	2/7	2/9	2/9	2/9	2/9	2/9	9	9	9	9	9
VTAP RC45J	1/1	1/1	-	-	-	-	-	-	-	-	-
TC45J	13/11	13/11	12/8	7/6	1/2	1/-	-	-	-	-	-
VTAP(X)	-	-	-/4	-/8	-/12	-/4	14	14	14	14	14
VTBP T28B	3/3	3/3	3/3	2/3	1/3	1/3	3	3	3	3	3
UR2B	-/4	-/2	-/2	-	-	-	-	-	-	-	-
HC UR34D	10/6	10/8	10/8	10/10	10/10	10/10	10	10	10	10	10
TOTAL MABS A/C											
	53/47	51/47	48/47	39/47	30/48	29/48	48	48	48	48	48

\* Navigation Trainer

AIRCRAFT	FY-66	FY-67	FY-68	FY-69	FY-70	FY-71	FY-72	FY-73	FY-74	FY-75	FY-76
3 28 45 01 3											
HQ, Fleet Marine Force (LANT & PAC)											
VRH C54	2/2	2/2	-/2	-/2	-/2	-/1	-	-	-	-	-
VRM C117D	1/1	1/1	1/1	1/1	1/1	1/1	-	-	-	-	-
C131F	2/2	2/2	2/2	2/2	2/2	2/2	2	-	-	-	-
C4B	-	-	-	-	-	-/1	2	4	4	4	4
VTBJ T1A/T2A	3/4	3/4	3/3	3/1	1/-	1/-	-	-	-	-	-
VTSJ T39E	-	-	-/1	-/3	-/4	-/4	4	4	4	4	4
VTAP TC45J	3/3	3/3	-/2	-	-	-	-	-	-	-	-
VTAP(X)	-	-	-/1	-/3	-/3	-/3	3	3	3	3	3
TOTAL											
	11/12	11/12	6/12	6/12	4/12	4/12	11	11	11	11	11
VMAT-1 Cherry Point											
VTBJ TP9J	21/21	15/15	1/10	-	-	-	-	-	-	-	-
TA4E	1/1	9/9	23/15	24/15	24/15	24/14	8	-	-	-	-
VTBJ(X)	-	-	-	-	-	1/1	7	15	15	15	15
TVAN TA6A	-	-	-	-/10	-/10	-/10	10	10	10	10	10
TOTAL											
	22/22	24/24	24/25	24/25	24/25	25/25	25	25	25	25	25

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DECLASSIFIED

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AIRCRAFT	FY-66	FY-67	FY-68	FY-69	FY-70	FY-71	FY-72	FY-73	FY-74	FY-75	FY-76
HQ, Fleet Marine Force (LANT & PAC) (cont)											
VMFT-2 El Toro											
VTAF TF9J	21/21	14/14	1/-	-	-	-	-	-	-	-	-
TA4E	1/1	10/10	23/9	24/9	24/9	23/9	3	3	-	-	-
VTAF(X)	-	-	-	-	-	-	6	6	9	9	9
F4B/J	-	-	-/15	-/15	-/15	-/15	15	15	15	15	15
TOTAL	22/22	24/24	24/24	24/24	24/24	23/24	24	24	24	24	24
TOTAL VMAT/VMFT	44/44	48/48	48/49	48/49	48/49	48/49	49	49	49	49	49
TOTAL HQ FMF	55/56	59/60	54/61	54/61	52/61	52/61	60	60	60	60	60

7 54 60 01 3

## \*\* Marine Command and Direction - HQMC Flight Line

VRR C54	1/1	1/1	1/1	1/1	1/1	1/1	1	1	1	1	1
VRM C131	1/1	1/1	1/1	1/1	1/1	1/1	1	1	1	1	1
VC117	1/1	1/1	1/-	1/-	-	-	-	-	-	-	-
C140	-	-	-/1	-/1	-/1	-/1	1	1	1	1	1
VTBP T28B	9/5	9/5	9/5	6/5	4/5	4/5	5	5	5	5	5
VTBJ T33	2/10	2/-	2/-	2/-	2/-	2/-	-	-	-	-	-
T1A/T2A	-	-/10	-/10	-/10	-/10	-/10	10	10	10	10	10
VUL U11A	1/1	1/1	1/1	1/1	1/1	-/1	1	1	1	1	1
TOTAL A/C	15/19	15/19	15/19	12/19	9/19	8/19	19	19	19	19	19

7 54 82 01 3

## Marine Support, Other - HMX-1

HH CH53A	-	2/2	2/2	2/2	2/2	2/2	2	2	2	2	2
HM VH3A	4/4	4/4	4/4	4/4	4/4	4/4	4	4	4	4	4
SH3A	1/1	1/1	1/1	-/1	-/1	-/1	1	1	1	1	1
CH46A	8/8	9/9	9/9	9/9	9/9	9/9	9	9	9	9	9
VH34D	4/4	4/4	4/4	4/4	4/4	4/4	4	4	4	4	4
UH34D	3/3	-	-	-	-	-	-	-	-	-	-
	4/4	4/4	4/4	4/4	4/4	4/4	4	4	4	4	4
TOTAL A/C	24/24	24/24	24/24	23/24	23/24	23/24	24	24	24	24	24

7 06 06 01 3

## \*\* Marine Professional Training - MCAS Quantico

SOES, Quantico											
VRH VC54	1/1	1/1	-/1	-/1	-/1	-/1	1	1	1	1	1
VRM C117D	1/1	1/1	1/1	1/1	1/1	1/1	1	1	1	1	1
VTAP RC45J	1/1	1/1	1/1	1/1	1/-	1/-	-	-	-	-	-
TC45J	8/6	7/6	7/6	6/6	4/-	3/-	-	-	-	-	-
VTAP(X)	-	-	-	-	-/7	-/7	7	7	7	7	7
VTBP T28B	7/7	7/7	7/7	6/7	4/7	3/7	7	7	7	7	7
TOTAL A/C	18/16	17/16	16/16	14/16	10/16	8/16	16	16	16	16	16

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DECLASSIFIED

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DECLASSIFIED

AIRCRAFT		FY-66	FY-67	FY-68	FY-69	FY-70	FY-71	FY-72	FY-73	FY-74	FY-75	FY-76
3 28 40 01 3												
MAW Support A/C (MAMS & H&MS)												
2d MAW												
MAMS-27												
VRH	C54	2/2	2/2	2/-	2/-	2/-	2/-	-	-	-	-	-
	C130E	-	-	-/2	-/3	-/3	-/3	3	3	3	3	3
VRM	C117D	3/4	3/4	3/4	3/2	3/1	3/-	-	-	-	-	-
VTAJ	T1A/T2A	4/4	4/4	4/-	4/-	4/-	4/-	-	-	-	-	-
	TA4E	-	-	-/4	-/4	-/4	-/4	4	4	-	4	4
	VTAJ(X)	-	-	-	-	-	-	-	-	4	-	-
VALP	A1E	2/-	2/-	2/-	2/-	2/-	2/-	-	-	-	-	-
TOTAL		11/10	11/10	11/10	11/9	11/8	11/7	7	7	7	7	7
H&MS-14												
VRH	C130E	-	-	-	-	-/1	-/1	1	1	1	1	1
VRM	C117D	1/1	1/1	1/1	1/1	1/-	1/-	-	-	-	-	-
VTAJ	T1A/T2A	2/2	2/2	2/2	2/-	2/-	2/-	-	-	-	-	-
	TA4E	-	-	-	-/2	-/2	-/2	-	-	-	-	-
	VTAJ(X)	-	-	-	-	-	-	2	2	2	2	2
TOTAL		3/3	3/3	3/3	3/3	3/3	3/3	3	3	3	3	3
H&MS-24												
VRH	C130E	-	-	-	-	-	-/1	1	1	1	1	1
VRM	C117D	1/1	1/1	1/1	1/1	1/1	1/-	-	-	-	-	-
VTAJ	T1A/T2A	3/3	3/3	3/-	3/-	3/-	3/-	-	-	-	-	-
	TA4E	-	-	-/3	-/3	-/3	-/3	3	3	-	-	-
	VTAJ(X)	-	-	-	-	-	-	-	-	2	2	2
TOTAL		4/4	4/4	4/4	4/4	4/4	4/4	4	4	3	3	3
H&MS-26												
VRH	C130E	-	-	-	-	-	-/1	1	1	1	1	1
VRM	C117D	1/1	1/1	1/1	1/1	1/1	1/-	-	-	-	-	-
TOTAL		1/1	1/1	1/1	1/1	1/1	1/1	1	1	1	1	1
H&MS-31												
VRH	C130E	-	-	-	-	-	-/1	1	1	1	1	1
VRM	C117D	-/1	-/1	-/1	-/1	-/1	-	-	-	-	-	-
	C47	1/-	1/-	1/-	1/-	1/-	1/-	-	-	-	-	-
VTAJ	T1A/T2A	3/3	3/3	3/-	3/-	3/-	3/-	-	-	-	-	-
	TA4E	-	-	-/3	-/3	-/3	-/2	-	-	-	-	-
	VTAJ(X)	-	-	-	-	-	-/1	3	3	3	3	3
TOTAL		4/4	4/4	4/4	4/4	4/4	4/4	4	4	4	4	4
H&MS-32												
VRH	C130E	-	-	-	-	-	-/1	1	1	1	1	1
	C117D	-/1	-/1	-/1	-/1	-/1	-	-	-	-	-	-
VRM	C47	1/-	1/-	1/-	1/-	1/-	1/-	-	-	-	-	-
VTAJ	T1A/T2A	3/3	3/3	3/-	3/-	3/-	3/-	-	-	-	-	-
	TA4E	-	-	-/3	-/3	-/3	-/3	1	-	-	-	-
	VTAJ(X)	-	-	-	-	-	-	2	3	3	3	3
TOTAL		4/4	4/4	4/4	4/4	4/4	4/4	4	4	4	4	4
2d MAW TOTAL		27/26	27/26	27/26	27/25	27/24	27/23	23	23	22	22	22

II-V-1-4

		FY-66	FY-67	FY-68	FY-69	FY-70	FY-71	FY-72	FY-73	FY-74	FY-75	FY-76
<u>MAW Support A/C (NAMS &amp; H&amp;MS) (Continued)</u>												
3d XAW												
NAMS-37												
VRH	C54	-/1	-/1	-	-	-	-	-	-	-	-	-
	C130E	-	-	-/1	-/3	-/4	-/4	4	4	4	4	4
VRM	C117D	4/4	4/4	4/4	4/1	4/-	4/-	-	-	-	-	-
VT AJ	T1A/T2A	4/4	4/4	4/-	4/-	4/-	4/-	-	-	-	-	-
	TA4E	-	-	-/4	-/4	-/4	-/4	4	4	-	-	-
	VT AJ(X)	-	-	-	-	-	-	-	4	4	4	4
TOTAL		8/9	8/9	8/9	8/8	8/8	8/8	8	8	8	8	8
H&MS-15												
VRH	C130E	-	-	-	-	-/1	-/1	1	1	1	1	1
	C117D	-/1	-/1	-/1	-/1	-	-	-	-	-	-	-
VRM	C47	1/-	1/-	1/-	1/-	1/-	1/-	-	-	-	-	-
VT AJ	T1A/T2A	3/3	3/3	3/-	3/-	3/-	3/-	-	-	-	-	-
	TA4E	-	-	-/3	-/3	-/3	-/3	3	3	-	-	-
	VT AJ(X)	-	-	-	-	-	-	-	3	3	3	3
TOTAL		4/4	4/4	4/4	4/4	4/4	4/4	4	4	4	4	4
H&MS-33												
VRH	C130E	-	-	-	-	-	-/1	1	1	1	1	1
	C117D	-/1	-/1	-/1	-/1	-/1	-	-	-	-	-	-
VRM	C47	1/-	1/-	1/-	1/-	1/-	1/-	-	-	-	-	-
VT AJ	T1A/T2A	3/3	3/3	3/-	3/-	3/-	3/-	-	-	-	-	-
	TA4E	-	-	-/3	-/3	-/3	-/3	3	3	-	-	-
	VT AJ(X)	-	-	-	-	-	-	-	3	3	3	3
TOTAL		4/4	4/4	4/4	4/4	4/4	4/4	4	4	4	4	4
H&MS-13 Kaneohe Bay												
VRH	C54	3/1	3/1	3/1	3/-	3/-	3/-	-	-	-	-	-
	C130E	-	-	-	-/1	-/1	-/1	1	1	1	1	1
VT AJ	TF9J	3/3	-	-	-	-	-	-	-	-	-	-
	TA4E	-	3/3	3/3	3/3	3/3	3/3	3	3	-	-	-
	VT AJ(X)	-	-	-	-	-	-	-	3	3	3	3
TOTAL		6/4	6/4	6/4	6/4	6/4	6/4	4	4	4	4	4
3d XAW TOTAL		22/21	22/21	22/21	22/20	22/20	22/20	20	20	20	20	20
1st XAW												
NAMS-17												
VRH	C54	1/3	1/3	1/-	1/-	1/-	1/-	-	-	-	-	-
	C130E	-	-	-/2	-/3	-/3	-/3	3	3	3	3	3
VRM	C117D	3/3	3/3	3/3	3/2	3/1	3/-	-	-	-	-	-
VT AJ	TF9J	3/3	-/-	-/-	-/-	-/-	-/-	-	-	-	-	-
	TA4E	1/1	4/4	4/4	4/4	4/4	4/4	4	-	-	-	-
	VT AJ(X)	-	-	-	-	-	-	-	4	4	4	4
VTAP	TC45J	-/2	-/2	-/1	-	-	-	-	-	-	-	-
	VTAP(X)	-	-	-/1	-/2	-/2	-/2	2	2	2	2	2
HG	UH34D	2/2	2/2	2/2	2/2	2/2	2/2	2	2	2	2	2
TOTAL		10/14	10/14	10/13	10/13	10/12	10/11	11	11	11	11	11

II-V-1-5



AIRBASE	FY-66	FY-67	FY-68	FY-69	FY-70	FY-71	FY-72	FY-73	FY-74	FY-75	FY-76
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## NAF Support A/C (NAMS &amp; H&amp;MS) (Continued).

NAMS-11											
VRM C130E	-	-	-	-	-/1	-/1	1	1	1	1	1
VRM C117D	1/1	1/1	1/1	1/1	1/-	1/-	-	-	-	-	-
VTAJ TF9J	2/2	-	-	-	-	-	-	-	-	-	-
TA4E	-	2/2	2/2	2/2	2/2	2/2	2	-	-	-	-
VTAJ(X)	-	-	-	-	-	-	-	2	2	2	2
TOTAL	3/3	3/3	3/3	3/3	3/3	3/3	3	3	3	3	3

NAMS-12											
VRM C130E	-	-	-	-	-/1	-/1	1	1	1	1	1
VRM C117D	1/1	1/1	1/1	1/1	1/-	1/-	-	-	-	-	-
VTAJ TF9J	2/2	-	-	-	-	-	-	-	-	-	-
TA4E	-	2/2	2/2	2/2	2/2	2/2	-	-	-	-	-
VTAJ(X)	-	-	-	-	-	-	2	2	3	3	3
TOTAL	3/3	3/3	3/3	3/3	3/3	3/3	3	3	4	4	4

NAMS-16											
VRM C130E	-	-	-	-	-	-/1	1	1	1	1	1
VRM C117D	1/1	1/1	1/1	1/1	1/1	1/-	-	-	-	-	-
TOTAL	1/1	1/1	1/1	1/1	1/1	1/1	1	1	1	1	1
1st NAF TOTAL A/C	17/21	17/21	17/20	17/20	17/19	17/18	18	18	19	19	19

3 25 -1 01 3

## Marine Air Bases

## Cherry Point

VRM *C54	1/1	1/1	1/1	1/1	1/-	1/-	-	-	-	-	-
VRM *TC4B	-	-	-	-	-/2	2	2	2	2	2	2
C-119E	1/1	1/1	1/1	1/-	1/-	1/-	-	-	-	-	-
C117D	1/1	1/1	1/1	1/-	1/-	1/-	-	-	-	-	-
C4B	-	-	-	/2	/2	2	2	2	2	2	2
VUL U11A	1/1	1/1	1/1	1/-	1/-	-	-	-	-	-	-
VTBJ T1A/T2A	-/2	-/2	-/2	-/2	-/2	-/2	2	2	2	2	2
T33B	6/-	6/-	6/-	5/-	4/-	4/-	-	-	-	-	-
VTAP TC45J	1/1	1/1	-	-	-	-	-	-	-	-	-
VTAP(X)	-	-	-/1	-/2	-/2	-/2	2	2	2	2	2
HG UH2B	-/2	-	-	-	-	-	-	-	-	-	-
UH34D	2/-	2/2	2/2	2/2	2/2	2/2	2	2	2	2	2
TOTAL	13/9	13/9	12/9	11/10	10/10	9/10	10	10	10	10	10

## \*Navigation Trainer

## New River

VTAP TC45J	2/2	2/2	2/2	2/2	-	-	-	-	-	-	-
VTAP(X)	-	-	-	-	-/2	-/2	2	2	2	2	2
VTBP T28B	3/3	3/3	3/3	2/3	1/3	1/3	3	3	3	3	3
TOTAL	5/5	5/5	5/5	4/5	1/5	1/5	5	5	5	5	5

## Beaufort

VRM C117D	1/1	1/1	1/1	1/-	1/-	1/-	-	-	-	-	-
C47	1/1	-/1	-/1	-	-	-	-	-	-	-	-
C4B	-	-	-	-/2	-/2	-/2	2	2	2	2	2
VTAJ T1A/T2A	2/2	2/2	2/2	2/2	2/2	2/2	2	2	2	2	2
HG UH2B	-/2	-/2	-/2	-	-	-	-	-	-	-	-
UH34D	2/-	2/-	2/2	2/2	2/2	2/2	2	2	2	2	2
TOTAL	6/6	5/6	5/6	5/6	5/6	5/6	6	6	6	6	6

ALBUQUERQUE	FY-66	FY-67	FY-68	FY-69	FY-70	FY-71	FY-72	FY-73	FY-74	FY-75	FY-76
<u>Yuma</u>											
DEM C117D	1/1	1/1	1/1	1/-	1/-	1/-	-	-	-	-	-
C47	1/1	-/1	-/1	-	-	-	-	-	-	-	-
C4B	-	-	-	-/2	-/2	-/2	2	2	2	2	2
WIB T33B	2/2	2/-	2/-	2/-	2/-	2/-	-	-	-	-	-
T1A/T2A	-	-/2	-/2	-/2	-/2	-/2	2	2	2	2	2
VTAP TC45J	1/1	1/1	1/1	-	-	-	-	-	-	-	-
VTAP(X)	-	-	-	-/1	-/1	-/1	1	1	1	1	1
HG UH34D	2/2	2/2	2/2	2/2	2/2	2/2	2	2	2	2	2
TOTAL	7/7	6/7	6/7	5/7	5/7	5/7	7	7	7	7	7
<u>El Paso</u>											
DEM C117D	3/3	3/3	3/3	2/-	2/-	2/-	-	-	-	-	-
C4B	-	-	-	-/3	-/3	3	3	3	3	3	3
WIL U11A	1/1	1/1	-/1	-	-	-	-	-	-	-	-
T33B	3/-	3/-	3/-	3/-	2/-	2/-	-	-	-	-	-
T1A/T2A	-/3	-/3	-/3	-/3	-/3	3	3	3	3	3	3
TC45J	4/4	4/4	4/-	-	-	-	-	-	-	-	-
VTAP(X)	-	-	-/4	-/5	-/5	5	5	5	5	5	5
UH34D	2/2	2/2	2/2	2/2	2/2	2/2	2	2	2	2	2
TOTAL	13/13	13/13	12/13	7/13	6/13	6/13	13	13	13	13	13
<u>Kaneohe Bay</u>											
DEM C47	1/1	1/1	1/1	-	-	-	-	-	-	-	-
C4B	-	-	-	-/1	-/1	-/1	1	1	1	1	1
VTAP RC45J	1/1	1/1	-/1	-/1	-	-	-	-	-	-	-
TC45J	1/1	1/1	1/1	1/1	-/1	-	-	-	-	-	-
VTAP(X)	-	-	-	-/-	-/1	-/2	2	2	2	2	2
HG UH34D	2/2	2/2	2/2	2/2	2/2	2/2	2	2	2	2	2
TOTAL	5/5	5/5	4/5	3/5	2/5	2/5	5	5	5	5	5
<u>Exuma</u>											
VTAP TC45J	4/2	4/2	4/2	4/2	1/-	1/-	-	-	-	-	-
VTAP(X)	-	-	-	-/-	-/2	-/2	2	2	2	2	2
TOTAL	4/2	4/2	4/2	4/2	1/2	1/2	2	2	2	2	2

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SECRET		FY-66	FY-67	FY-68	FY-69	FY-70	FY-71	FY-72	FY-73	FY-74	FY-75	FY-76
<u>Recapitulation of Total Marine Aircraft</u>												
PROGRAM III												
3 28 -1 01 3	MAW Combat (Includes 3 28 40 95 3 - Composite Squadrons)	1006/1006	1009/1015	999/1013	996/1053	993/1067	993/1079	1092	1092	1092	1092	1092
	MAW Support	66/68	66/68	66/67	66/65	66/63	66/61	61	61	61	61	61
3 28 -1 01 3	HQ PMF (LANT & PAC)	55/56	59/60	54/61	54/61	52/61	52/61	60	60	60	60	60
3 28 -1 01 3	Marine Air Bases	53/47	51/47	48/47	39/47	30/48	29/48	48	48	48	48	48
TOTAL PROGRAM III		1180/1177	1185/1190	1167/1188	1155/1226	1141/1239	1140/1249	1261	1261	1261	1261	1261
PROGRAM VII												
7 54 -1 01 3	Marine Command and Direction - HQMC Flight Line	15/19	15/19	15/19	12/19	9/19	8/19	19	19	19	19	19
7 54 -1 01 3	Marine Support, Other - HMX-1	24/24	24/24	24/24	23/24	23/24	23/24	24	24	24	24	24
7 06 06 01 3	Marine Professional Training - Quantico	18/16	17/16	16/16	14/16	10/16	8/16	16	16	16	16	16
TOTAL PROGRAM VII		57/59	56/59	55/59	49/59	42/59	39/59	59	59	59	59	59
TOTAL PROGRAM III & VII		1237/1236	1241/1249	1222/1247	1204/1285	1183/1298	1179/1308	1320	1320	1320	1320	1320

## FYFS&FP numbers from APDF-approved element detail and summary dated 26 March 1965 which reflects the Format B Decision of 19 December 1964 on Mission Support Aircraft.  
Mission support aircraft program objectives are subject to change on completion of the 1965 MSA study.

TACTICAL AIRCRAFT DESCRIPTION AND FORCE LEVELS

<u>Wing Aircraft</u>	<u>Page II-V-2-</u>
F8B/C/D/E	2, 3
F4B/J	4, 5, 6
A4C/E	7, 8, 9
A6A	10, 11
A7A	12, 13
OV-10A	14, 15
KC-130F	16, 17, 18
UH-34D	19, 20
CH-46A	21, 22
CH-37C	23, 24
CH-53A	25, 26
01B/C	27, 28
OH-43D	29, 30
UH-1E	31, 32
RF8A	33, 34
EF-10B	35, 36
RF-4B	37, 38
EA6A/B	39, 40
E2A	41, 42
Support Aircraft	43
C4B	44
T39A	45

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F8B, C, D, E (CRUSADER)Description:

The F8B and C are single engine, single place day fighters for the air defense mission in fair weather. The F8D and E are improved versions with increased detection (Radar) capability and with the MK-30 Sidewinder provide limited all-weather air defense.

Marine Corps Force Levels:

	<u>FY65</u>	<u>FY66</u>	<u>FY67</u>	<u>FY68</u>
FYFS&FP	120	75	30	-
Objectives	120	75	30	-

Mission Requirements:

Provide air defense of the amphibious objective area and limited close air support.

Basis of Force Levels in the FYFS&FP:

This number of F8 aircraft in addition to the numbers of F4B's in the FYFS&FP provide sufficient aircraft to equip 15 fighter squadrons with 15 planes each. This number of aircraft will provide aircraft to man four CAP stations during 12 daylight hours and three CAP stations 12 hours at night. The kill probability of the F8 is considerably lower than the F4 due to limitations in the electronic system, missile system and lower aircraft performance.

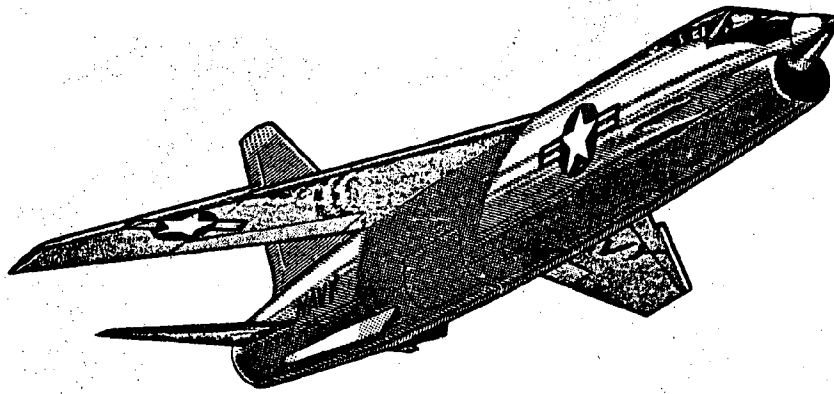
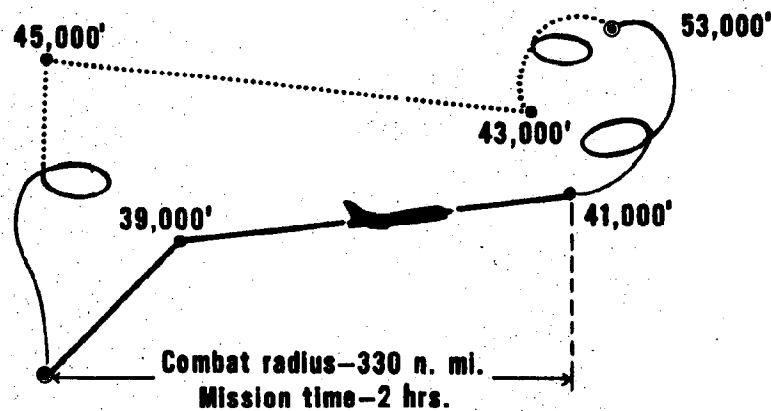
Basis of Force Levels in the Program Objectives:

Marine Objective is to phase out the F8 series fighters as replacement F4B's become available on a one-for-one basis.

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**F-8D/E****CRUSADER****CHANCE VUGHT****MISSION PROFILE****FEATURES**

The F8D and E are single place all-weather fighters. They are improved versions of the F8B and C with increased detection capability and are armed with the MK-30 Sidewinder Missiles. The F8E has provisions for one station on each Wing for external stores in addition to missile station on side of fuselage.

II-V-2-3

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F4B/F4J (PHANTOM II)Description:

A two place, twin jet, all-weather fighter with a maximum speed of Mach 2.25 and a combat ceiling of 57,000 feet. The addition of multiple bomb racks will allow the aircraft to perform a secondary mission of ground attack.

Marine Corps Force Levels:

	<u>FY65</u>	<u>FY66</u>	<u>FY67</u>	<u>FY68</u>	<u>FY69</u>	<u>FY70</u>
FYFS&FP	105	150	195	225	225	225
Objectives	105	150	195	225	225	225

Mission Requirements:

The F4 is required in amphibious operations for the purpose of:

a. Identifying intercepting and destroying enemy aircraft in conjunction with ground (MTDS) or airborne (E2A) control under all-weather conditions.

b. Escort of friendly aircraft under all-weather conditions.

c. Providing close air support and destruction of surface targets as an additional capability.

d. Maintain capability to employ aerial refueling and to operate from Short Airfield for Tactical Support (SATS).

Basis of Force Levels in the Approved FYFS&FP:

The number of F4's approved in the FYFS&FP will provide five 15-plane squadrons in each of the three active MAWs. Each Wing will have sufficient F4's (75) to maintain four Combat Air Patrol (CAP) stations 12 hours per day and three CAP stations 12 hours per night. In addition, this number provides eight aircraft on strip alert to backup the CAP aircraft for saturation raids.

Basis of Force Levels in the Program Objectives:

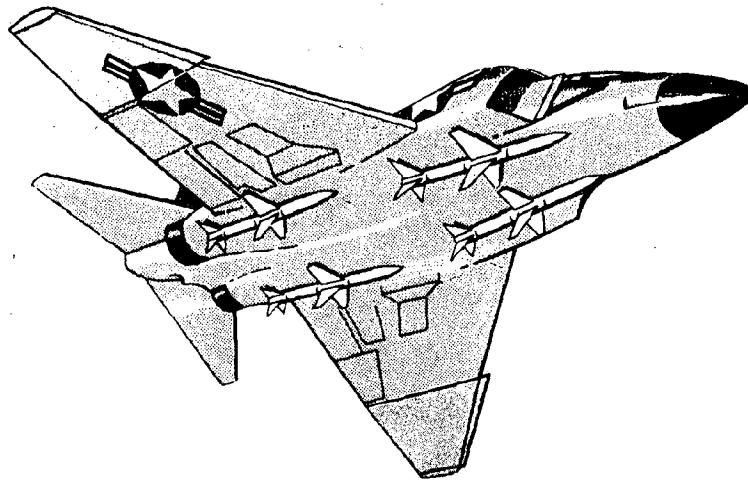
The number of F4's authorized in the FYFS&FP is adequate to meet Marine Objectives.

Reference: MCLFDC VF/VA Study

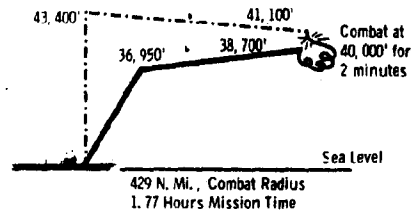
II-V-2-4

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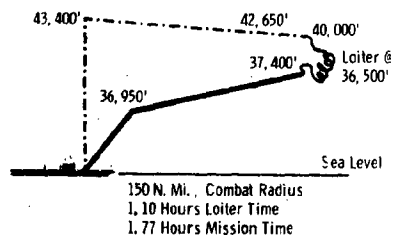
CONFIDENTIAL

**F-4B (F4H-1)****PHANTOM II****McDONNELL****MISSION PROFILE(S)**

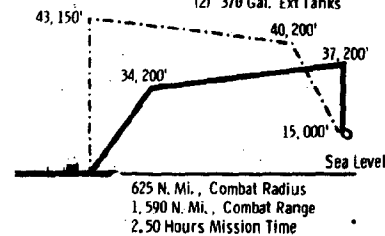
GENERAL PURPOSE FIGHTER  
Configuration: 4 Sparrow III missiles



COMBAT AIR PATROL  
Configuration: 4 Sparrow III missiles



SPECIAL WEAPONS DELIVERY  
Configuration: (1) Mk 28 Special Store +  
(2) 370 Gal. Ext Tanks

**FEATURES**

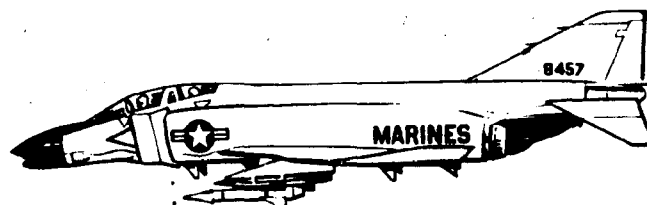
CREW OF TWO, BOUNDARY LAYER CONTROL, AJB-3A ALL-ATTITUDE BOMBING SYSTEM. ASN-19 NAVIGATIONAL COMPUTER, INFRARED SEARCH AND TRACK DEVICE, AMCS AERO-1A MISSILE CONTROL SYSTEM: REPLACED BY AWG-10 (PULSE DOPPLER) MISSILE CONTROL SYSTEM IN LATE FY 65 A/C. RECEIVER AND TANKER INFILIGHT RE-FUELING CAPABILITY, AUTO PILOT, ASW-21 DATA LINK.

II-V-2-5

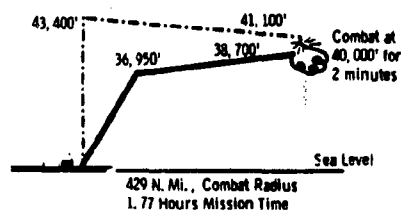
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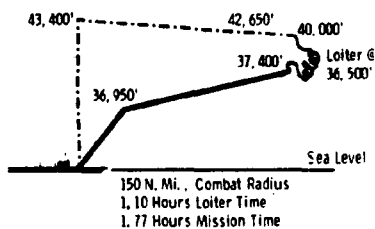
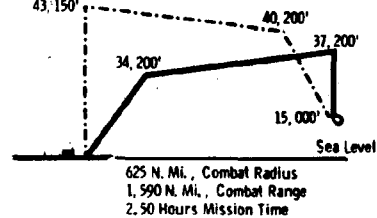
CONFIDENTIAL

**F-4J****PHANTOM II****McDONNELL****MISSION PROFILE (S)****GENERAL PURPOSE FIGHTER**

Configuration: 4 Sparrow III missiles

**COMBAT AIR PATROL**

Configuration: 4 Sparrow III missiles

**SPECIAL WEAPONS DELIVERY**Configuration: (1) Mk 28 Special Store +  
(2) 370 Gal. Ext Tanks**FEATURES**

The F4J is basically the same as the F4B with the following new or additional items of equipment: AWG-10 fire control system, 30 KVA electrical system, AJB-7 bombing system, Minaturized CNI, Drooped ailerons and slotted stabilator, increased landing weight capability, approach power compensator, ASW-25 data link, GVR-10 vertical reference, altitude reporting, crypto computer and an aft fuselage equipment bay.

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A4B, C, E (SKY HAWK)Description:

The A4 series are all lightweight jet attack aircraft capable of delivering conventional and special weapons. The A4E has an improved engine and two additional bomb stations.

Marine Corps Force Levels:

	<u>FY65</u>	<u>FY66</u>	<u>FY67</u>	<u>FY68</u>	<u>FY69</u>	<u>FY70</u>
FYFS&FP	220	180	140	80	60	40
Objectives	220	180	140	80	60	40

Mission Requirements:

Provide close air support and interdiction operations required during an amphibious assault. Capable of delivering a wide variety of conventional weapons against ground targets under visual conditions.

In conjunction with the TPQ-10 radar, the A4 series has a limited (radar line of sight) all-weather bombing capability and performs this mission.

Basis of Force Levels in the Approved FYFS&FP:

The number of aircraft approved in the FYFS&FP will provide sufficient light attack aircraft, together with the A6A (all-weather) attack aircraft for 12 attack squadrons.

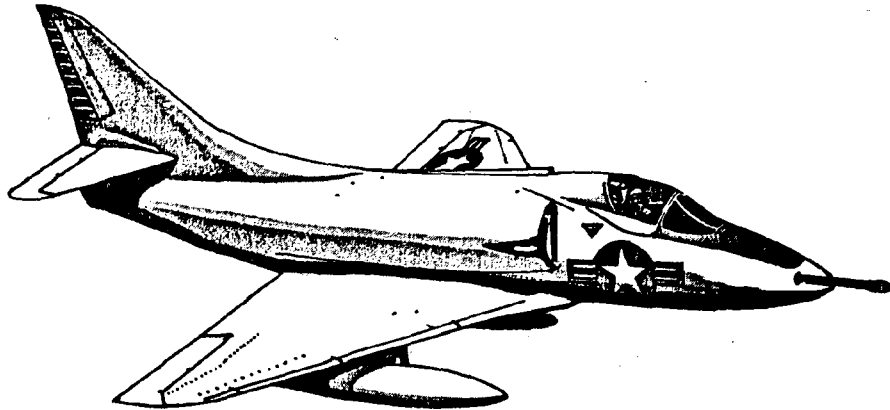
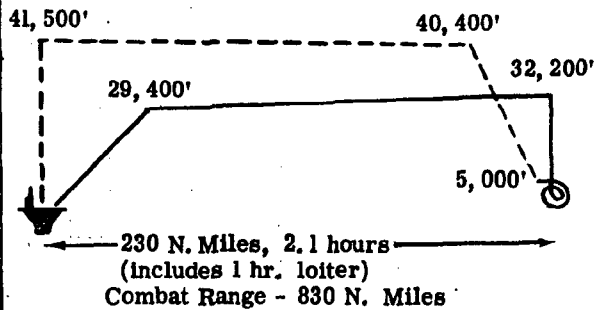
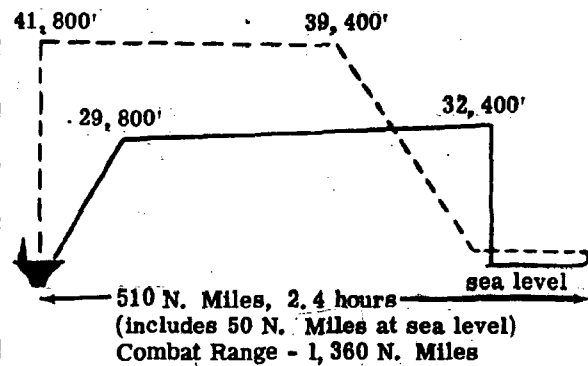
Basis of Force Levels in the Program Objectives:

Marine Objectives for A4 light attack aircraft are two 20 plane squadrons per Wing. This number of aircraft will provide 24 close air support sorties, 12 helicopter escort sorties and 10 deep interdiction sorties in support of a Marine Division. The requirement for this number of light attack sorties is based on actual combat experience as well as analysis of targeting plans of a typical amphibious operation in South East Asia. Additional all-weather attack sorties by A6A aircraft are required to provide the Marine Division with attack support during periods of darkness and bad weather.

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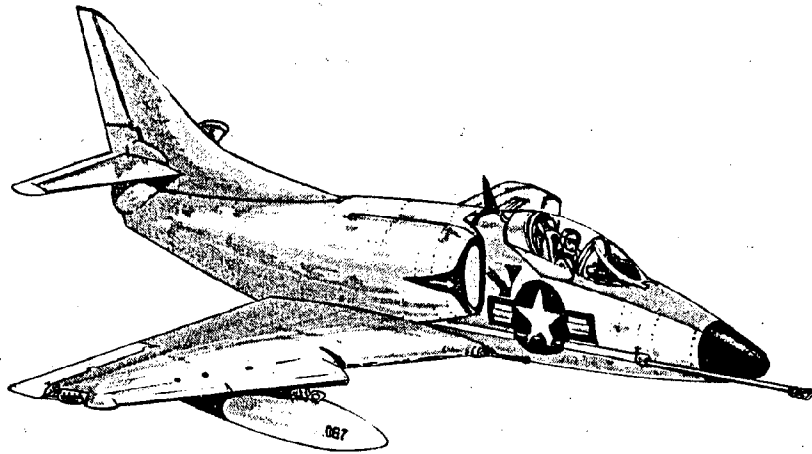
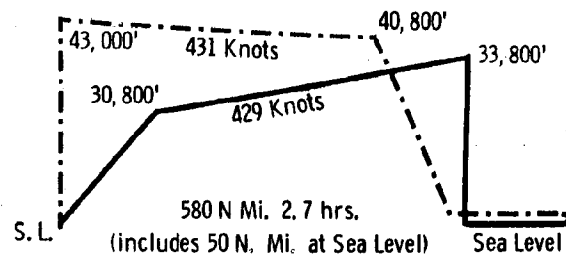
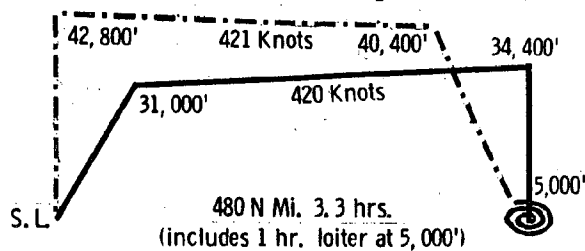
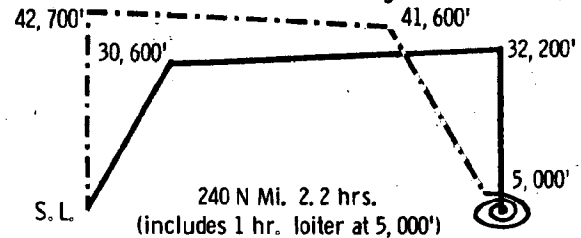
II-V-2-7

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**A-4C****SKY HAWK****DOUGLAS****MISSION PROFILE (S) LIGHT ATTACK****CONVENTIONAL WEAPONS ATTACK**  
(Ground Support)**SPECIAL WEAPONS ATTACK****FEATURES**

A4C IS A SINGLE PLACE, HIGH (SUBSONIC) PERFORMING, LIGHT JET ATTACK AIRCRAFT CAPABLE OF DIVE, GLIDE, AND LOFT BOMBING ATTACKS WITH CONVENTIONAL OR NUCLEAR WEAPONS. EQUIPPED WITH TERRAIN CLEARANCE RADAR AND CAPABLE OF AIR REFUELING AS A TANKER OR RECEIVER.

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**A-4E****SKY HAWK****DOUGLAS****MISSION PROFILE(S)****SEA LEVEL DELIVERY (2- 300 gal. Tanks)****CLOSE AIR SUPPORT (2 - 300 gal. Tanks)****CLOSE AIR SUPPORT (1 - 300 gal. Tank)****FEATURES**

CREW OF ONE, INFLIGHT REFUELING CAPABILITY AS TANKER AND RECEIVER, POWERED ELEVATORS, ASN-19 AUTO DEAD RECKONING NAVIGATOR.

DIFFERS FROM A4C BY: J52 ENGINE (VICE J65) WITH RELATED LONGER JET DUCTS AND EQUIPMENT CHANGES, 13" LONGER NOSE SECTION FOR ADDITIONAL AVIONICS GEAR, TWO MORE WING STATIONS CAPABLE OF CARRYING 500 LBS. EACH.

II-V-2-9

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A-6A (INTRUDER)DESCRIPTION:

The A-6A is a Carrier/SATS based, twin jet, all-weather attack aircraft. It carries a two-man crew and is equipped with a highly advanced electronic system capable of detecting and attacking fixed and moving targets under all conditions of darkness and bad weather.

MARINE CORPS FORCE LEVELS:

	<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
FYFS&FP	15	36	60	72	72	72
Objectives	15	36	60	72	90	90

MISSION REQUIREMENT:

The A6A is required in Amphibious Operations to:

- a. Conduct close air support under all-weather conditions.
- b. Conduct armed reconnaissance, interdiction operations and strikes against enemy installations, utilizing all types of conventional and NBC weapons compatible with the aircraft.
- c. Conduct airborne surveillance and attack against moving targets on the battlefield under all-weather conditions (No other aircraft has this capability).

BASIS FOR FORCE LEVELS IN APPROVED FYFS&FP:

The approved force levels provide for an orderly buildup from one 12-plane A-6A squadron in each of the 3 MAWs in FY66 to two 12-plane squadrons in each Wing by FY-68. These squadrons will replace a like number of 20-plane A-4 light attack squadrons. Twelve A-6As in each squadron will provide the minimum number of aircraft to maintain two A-6As continuously on-station during the hours of darkness and average periods of bad weather in daylight.

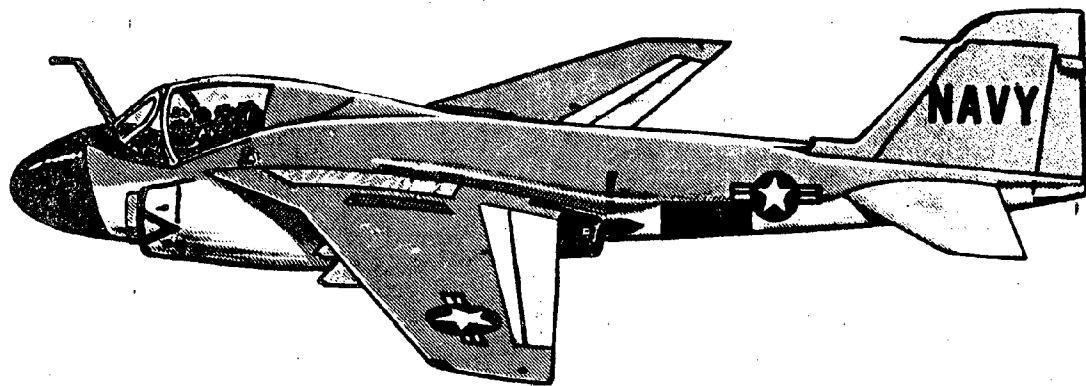
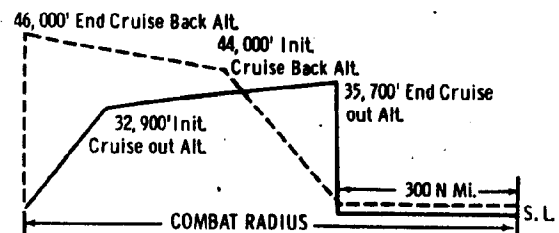
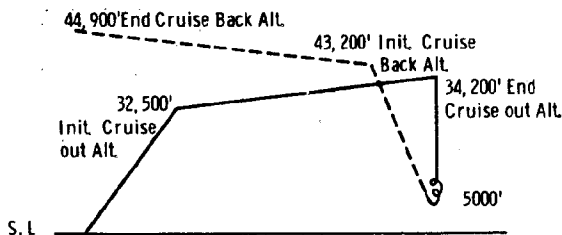
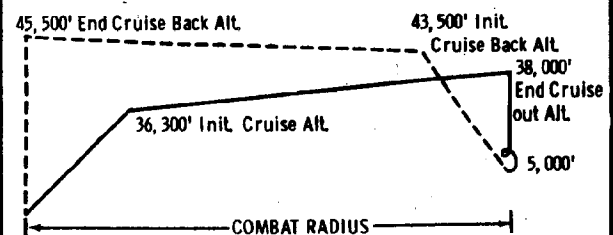
BASIS FOR FORCE LEVELS IN PROGRAM OBJECTIVE:

28 The Secretary of Defense, in his Format B decision of 8 Nov 1963, reduced the requested squadron complement from 15 to 12 aircraft. While the presently approved force structure of 12 A-6As per squadron will provide the minimum number of aircraft to maintain two A-6As continuously on-station during the hours of darkness and average periods of bad weather in daylight, any combat and/or operational attrition within this small complement will rapidly degrade this essential level of all-weather air support. An increase of three aircraft in each squadron to a total of 15 A-6As will provide a necessary degree of protection for this essential level of all-weather air support as well as additional all-weather capability for combat support under above average bad weather conditions. A total of 18 additional A-6As are thus required for the six 15 plane squadrons.

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**A6A****INTRUDER****GRUMMAN****MISSION PROFILE(S)****SEA LEVEL STORE DELIVERY****LOW ALTITUDE ATTACK****LOW ALTITUDE ATTACK****FEATURES**

CREW OF TWO. MOVING TARGET INDICATING SYSTEM. CAPABLE OF TAKEOFF WITH A USEFUL LOAD (FUEL AND WEAPONS) OF 26,095 POUNDS OVER A 50 FT. OBSTACLE IN APPROXIMATELY 4,900 FT. AND LANDING OVER A 50 FT. OBSTACLE IN APPROXIMATELY 2,100 FT. CAN CARRY UP TO 5 EXTERNAL TANKS OR STORES. CAPABLE OF CONDUCTING LOW LEVEL ATTACKS AGAINST SURFACE TARGETS INCLUDING SMALL, MOVING TARGETS (INTERDICTION) UNDER ALL WEATHER CONDITIONS.

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A7ADescription:

The A7A is a single seat light visual attack aircraft capable of carrying up to 7500 pounds of ordnance to a radius of 248 miles and remaining on station for one hour. In addition, this aircraft is armed with 2 sidewinders and 2 MK-12 20 mm guns. This aircraft is a derivative of the F8 Crusader with improved performance primarily due to the inherent features of the turbo fan engine (TF-30P).

Marine Corps Force Levels:

	<u>FY68</u>	<u>FY69</u>	<u>FY70</u>	<u>FY71</u>	<u>FY72</u>
FYFS&FP	40	60	80		
Objectives	40	60	80	100	120

Mission Requirements:

Provide close air support and interdiction operations required during an amphibious assault. The A7A is capable of delivering a wide variety of conventional as well as tactical special weapons with increased time on station and greater accuracy than the A4 series.

In conjunction with the TPQ-10 radar, the A7A has a limited (radar line of sight all-weather bombing capability and will augment the all-weather A6A during night and bad weather.

Basis of Force Levels in the FYFS&FP:

The four squadrons of A7As in the approved FYFS&FP will replace a like number of A4 squadrons. (Note: present FYFS&FP is not projected beyond FY70. Anticipate eventual approval in accordance with objective as indicated).

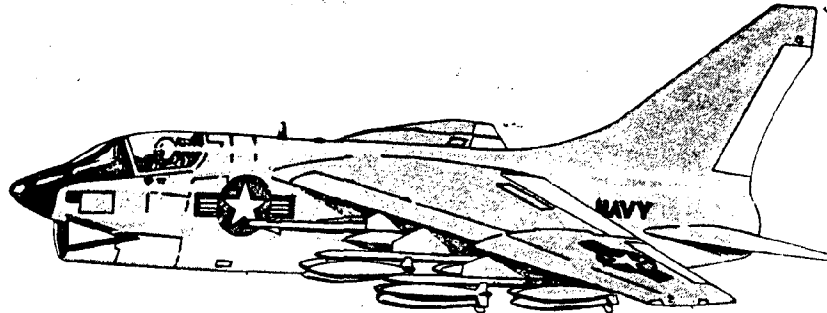
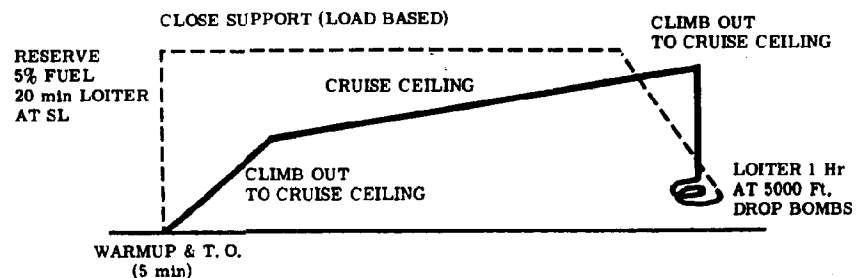
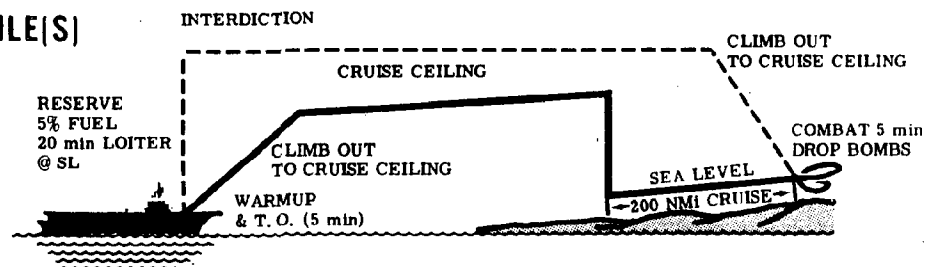
Basis of Force Levels in the Program Objectives:

Marine Objectives for light attack aircraft are two 20 plane squadrons per wing. This number of aircraft will provide 24 close air support sorties, 12 helicopter escort sorties and 10 deep interdiction sorties per day in support of a Marine Division. The requirement for this number of light attack sorties is based on actual combat experience as well as analysis of a targeting plan of a typical amphibious operation in South East Asia. Additional all-weather attack sorties by A6A aircraft are required to provide the Marine Division with attack support during periods of darkness and bad weather.

II-V-2-12

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**A7A****Ling-Temco-Vought****MISSION PROFILE(S)****FEATURES**

Derived from the F8 with a non-afterburning turbo-fan TF-30P-6 engine (10,500 lb. thrust, installed, max. static, S.L.) with a higher lift fixed wing and 8 external racks (6 wing, 2 fuselage) with maximum external load (rack capacity) of 20,000 lb. and two 20 MM guns.

II-V-2-13

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OV-10ADESCRIPTION.

A two place, twin engine, light armed reconnaissance aircraft capable of performing a variety of missions while operating in close proximity to combat troops from short unimproved fields, roads, and aircraft carriers.

MARINE CORPS FORCE LEVELS.

	<u>FY-68</u>	<u>FY-69</u>	<u>FY-70</u>
FYFS&FP	-	-	-
Objectives	27	54	54

MISSION REQUIREMENT.

a. The OV-10A is required to fill the gap existing between assault support helicopters and high performance jet aircraft.

b. Conduct observation, photographic and reconnaissance missions in the battlefield area, over enemy territory.

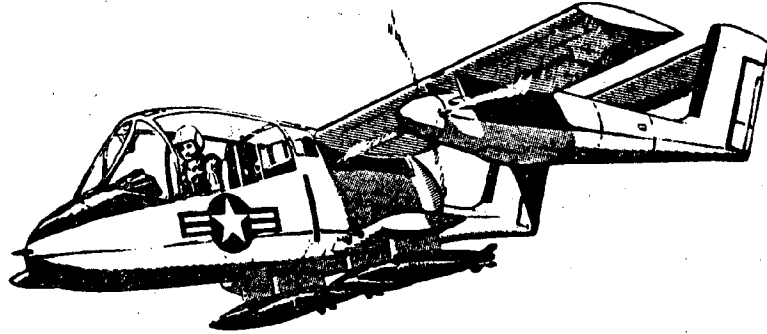
BASIS OF FORCE LEVELS IN THE PROGRAM OBJECTIVES.

To provide 18 aircraft in each VMO squadron and reduce the UH-1E aircraft in each VMO squadron from 24 to 12. The OV-10A will provide a substantial increase in readiness because of additional capability and flexibility available to the Landing Force commander during helicopter assault and subsequent operations.

II-V-2-14

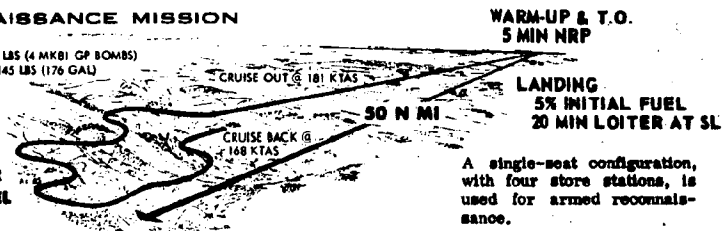
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**OV-10A (LARA)****NORTH AMERICAN****MISSION PROFILE(S)****ARMED RECONNAISSANCE MISSION**

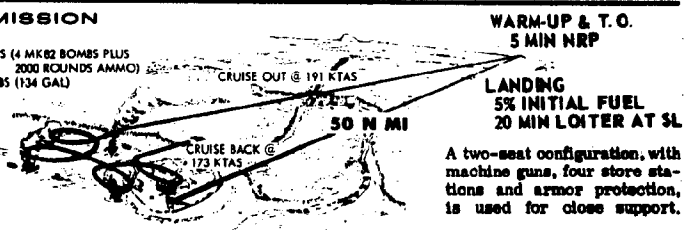
TOGW 7,462 LBS  
STORE LOAD 1,080 LBS (4 MK81 GP BOMBS)  
INTERNAL FUEL 1,145 LBS (176 GAL)

2 HR LOITER  
@ SEA LEVEL

**CLOSE SUPPORT MISSION**

TOGW 8,768 LBS  
STORE LOAD 2,315 LBS (4 MK82 BOMBS PLUS  
2000 ROUNDS AMMO)  
INTERNAL FUEL 871 LBS (134 GAL)

1 HR LOITER  
@ SEA LEVEL

**FEATURES**

THE OV-10A (LARA) IS A TWIN ENGINE TURBOPROP AIRCRAFT CAPABLE OF ROUGH TERRAIN SHORT FIELD OPERATIONS. ITS WIDE RANGE OF MISSION FLEXIBILITY INCLUDES: CLOSE AIR SUPPORT, ARMED AND VISUAL RECONNAISSANCE, PERSONNEL AND CARGO LIFT CAPACITY. SAFETY FEATURES INCLUDE SEAT EJECTION, ARMOR PROTECTION, TWIN ENGINES, DUAL PILOT CONTROL.

II-V-2-15

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KC-130F/E (Hercules)

The KC-130 is an aerial refueler/assault transport capable of operating from forward airfield or SATS.

Marine Corps Force Levels:

	<u>FY65</u>	<u>FY66</u>	<u>FY67</u>	<u>FY68</u>	<u>FY69</u>	<u>FY70</u>
FYFS&FP	36	36	36	36	36	36
Objectives	36	36	36	38	42	47

Mission Requirements:

The KC-130 is required in amphibious operation to:

- a. Provide aerial refueling for Marine Corps combat aircraft deploying into a combat area over extended ranges.
- b. Provide aerial refueling of Marine Corps combat aircraft within a combat area for purposes of mission range extension and/or low fuel state emergencies which may occur during SATS recovery operations.
- c. Provide assault air transport of troops and combat cargo between bases and airfields in the objective area.
- d. Provide air delivery of combat cargo and emergency resupply to include air drop into the objective area during night and all-weather conditions under TPQ-10 control.
- e. Provide for transport of essential SATS support vans and equipment that accompanies tactical aircraft.

Basis of Force Levels in the Approved FYFS&FP

The approved force levels of 36 aircraft provide for one 12 plane KC-130F squadron in each of three Marine Aircraft Wings. The number of aircraft provided are essentially based upon FY58 funds that were available at that time for this procurement and fall short of requirements as indicated below.

II-V-2-16

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Basis for Force Levels in the Program Objectives:

The indicated levels will provide by FY-72 an increase from 12 to 18 KC-130's in the VMGR squadron in each of three Marine Aircraft Wings. The increase of six aircraft per squadron is based on actual experience gained in the use of this aircraft in support of trans-Pac/Lant flights of fighter and attack squadrons and on air transport of troops and supplies for contingency operations/exercises in Vietnam, Thailand, Taiwan, Cuba and elsewhere. It is supported by the study referenced below.

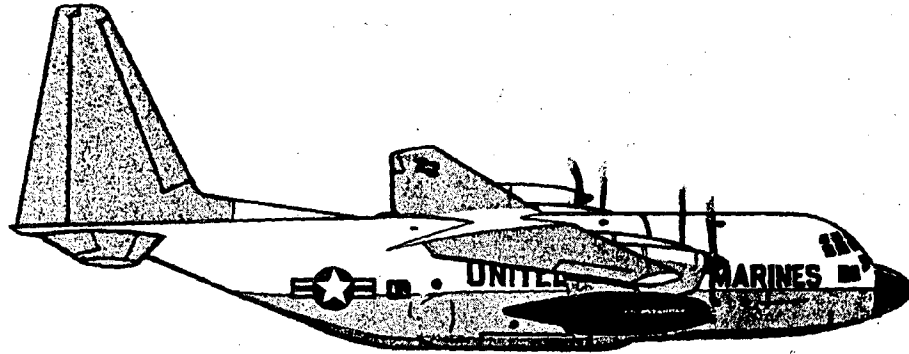
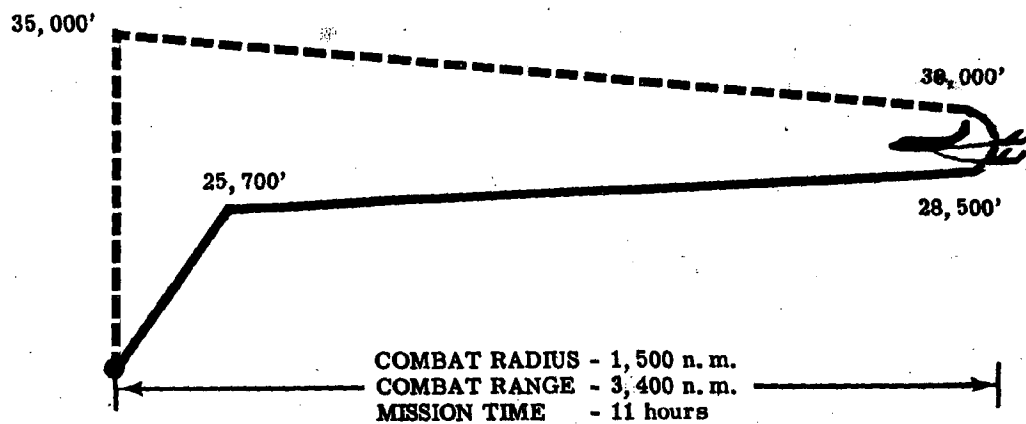
The proposed force level will provide the aerial refueling capability necessary in the assault phase to support the required utilization of the fighter and attack aircraft which are dependent upon aerial refueling support. It will also increase the organic assault airlift capability of each MEF.

Ref: DC/S (Air) Staff Study 1-64 (Subj: Use of Air Force KC-135 to provide aerial refueling and assault transport for Marine Corps requirements)

II-V-2-17

CONFIDENTIAL

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**KC-130F/E****HERCULES****LOCKHEED****MISSION PROFILE (S)****FEATURES**

The KC-130F is a turbo-prop, heavy, land-based aerial refueler/transport. It provides in-flight refueling of Tactical Marine Aircraft and provides intra-theater assault transport operations. The KC-130E is a later version of the KC-130F with higher allowable gross take-off weights.

II-V-2-18

CONFIDENTIAL

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UH-34D (SEA HORSE)Description:

A conventional main rotor and tail rotor troop transport helicopter manufactured by SIKORSKY.

Marine Corps Force Levels:

	<u>FY65</u>	<u>FY66</u>	<u>FY67</u>	<u>FY68</u>	<u>FY69</u>	<u>FY70</u>
FYFS&FP	288	264	192	120	48	24
Objectives	288	264	192	120	48	-

Basis of Force Levels in the Approved FYFS&FP:

To provide sufficient aircraft to outfit the medium transport helicopter squadrons with 24 aircraft each until introduction of the more capable CH-46A.

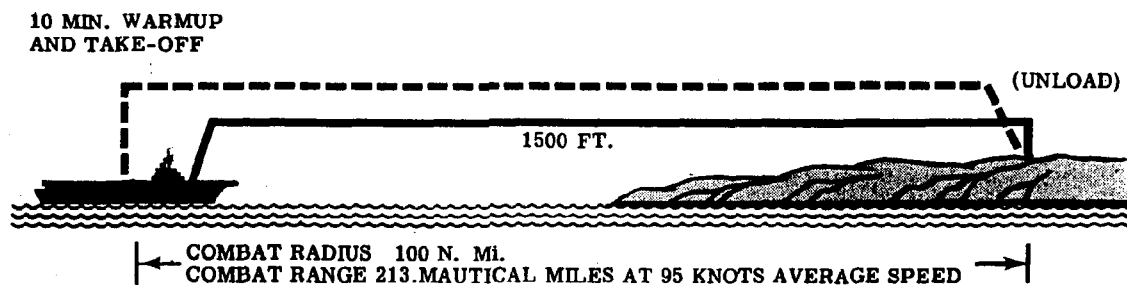
Basis of Force Levels in the Program Objectives:

To equip the 15 (15th squadron by FY1966) medium squadrons with an interim helicopter until availability of the CH-46A. Until the CH-46A introduction is complete, the objective to simultaneous lift the assault elements of two RLT's in each FMF a distance of 50 miles (radius within 60 to 90 minutes is not possible.

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II-V-2-19

CONFIDENTIAL

**UH-34D****SEAHORSE****SIKORSKY****MISSION PROFILE (S)****FEATURES**

Crew of three, accommodates 12 troops. Power is produced by a Wright R-1820-84 reciprocating engine. The rotor system is composed of a four bladed, all metal, main rotor combined with a four bladed, all metal automatic torque compensating tail rotor. Has external cargo hook.

II-V-2-20

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CH-46A (SEAKNIGHT)Description:

A tandem rotor transport helicopter built by the Vertol Division of Boeing, powered by two T-58-8 gas turbine engines. This helicopter will provide twin engine reliability coupled with a watertight hull and rear ramp loading.

Marine Corps Force Levels:

	<u>FY65</u>	<u>FY66</u>	<u>FY67</u>	<u>FY68</u>	<u>FY69</u>	<u>FY70</u>
FYFS&FP	48	96	168	240	312	336
Objectives	48	96	168	240	312	360

Mission Requirements:

The primary mission of the CH46A medium transport helicopter in amphibious operations includes:

- a. Transport of assault troops from the LPH to the objective area during all-weather conditions (17 combat troops/100 mile radius/125 knots)
- b. Movement of troops and equipment within the objective area.
- c. Transport of critical supplies.
- d. Evacuation of casualties.

Basis of Force Levels in the Approved FYFS&FP:

The number of CH46As in the presently approved FYFS&FP will provide (by FY70) 336 of the 360 medium helicopters required to transport the assault elements of 2 RLTs (4 BLTs), in each FMF, a distance of 50 miles radius with 60-90 minutes (in conjunction with 72 heavy helicopters (CH53As). This lift represents 5400 troops and 425 short tons.

Basis of Force Levels in the Program Objectives:

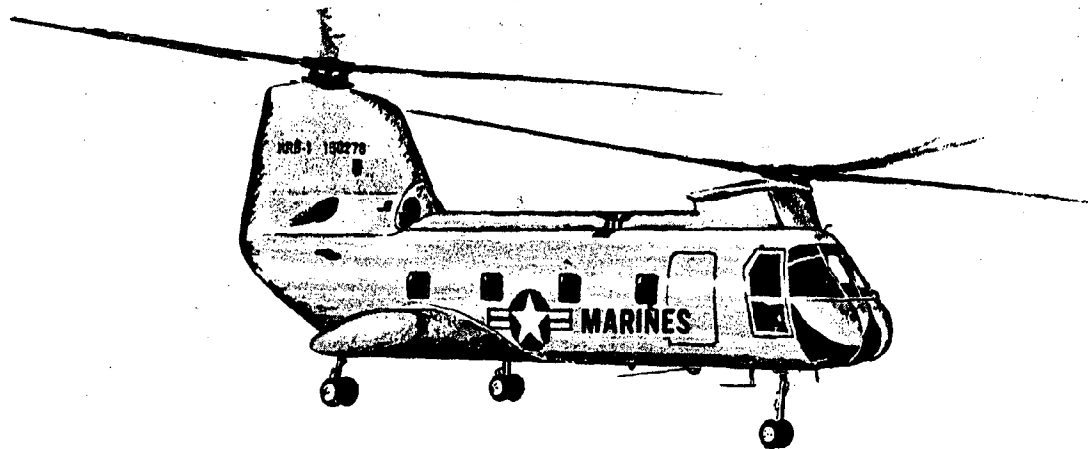
The FY70 objective for the CH46A would complete the modernization of all 15 medium helicopter squadrons.

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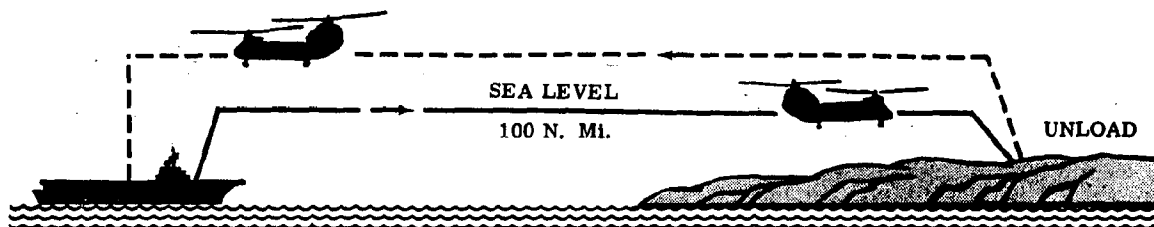
II-V-2-21



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**CH-46A****SEAKNIGHT****VERTOL****MISSION PROFILE(S)**

WARMUP AND  
TAKE-OFF (7 min.)

**FEATURES**

CREW OF THREE. ALL-METAL ROTOR BLADES, AUTOMATIC BLADE FOLDING, INTEGRATED CARGO LOADING, REAR RAMP LOADING. ACCOMMODATES MAXIMUM OF 27 TROOPS, OR 15 LITTERS AND TWO SEATS. HAS EMERGENCY AMPHIBIOUS CAPABILITY.

LOAD CAPACITY: NORMAL - 4,000 LBS. OR 17 TROOPS OVERLOAD: 6,900 LBS. OR 27 TROOPS

II-V-2-22

CONFIDENTIAL

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CH-37C (MOJAVE)Description:

A twin engine, single main rotor and tail rotor helicopter for the transport of assault cargo.

Marine Corps Force Levels:

	<u>FY65</u>	<u>FY66</u>	<u>FY67</u>	<u>FY68</u>
FYFS&FP	24	24	12	-
Objectives	24	24	12	-

Basis of the Levels in the Approved FYFS&FP:

To provide some heavy lift capability (4,500 lbs.) until introduction of the CH-53A. The force levels of the CH-37C represent the total available for assignment.

Basis of the Program Objectives:

Same as above.

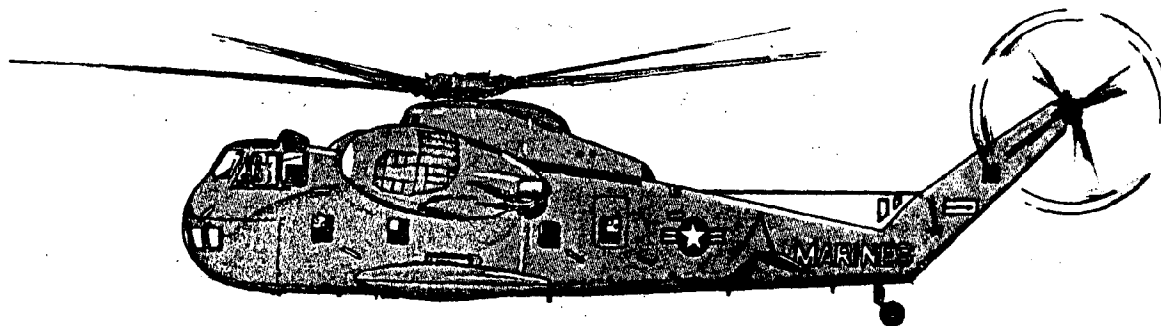
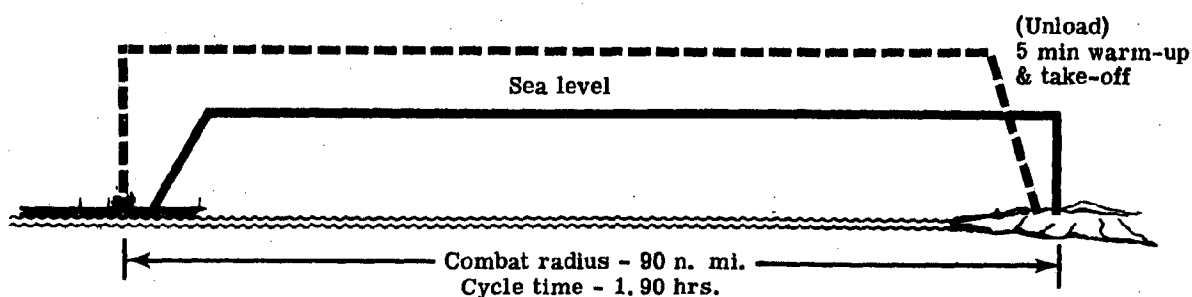
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II-V-2:-23

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**CH-37C**

MOJAVE

**SIKORSKY****MISSION PROFILE (S)****FEATURES**

Crew of three, transports troops, cargo and weapons during the assault phase of amphibious operations and provides tactical mobility and logistic support to forces ashore. Powered by two reciprocating engines, single main rotor, retractable landing gear, internal litter and external cargo fittings.

II-V-2-24

CONFIDENTIAL

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CH-53A (SEA STALLION)

The CH-53A manufactured by Sikorsky is a conventional main rotor/tail rotor helicopter powered by two G. E. T-64 gas turbine engines. It has watertight hull and rear ramp loading for 8,000 lbs. of cargo that can be lifted for a 100 n. m. radius at 150 knots.

Marine Corps Force Levels:

	<u>FY65</u>	<u>FY66</u>	<u>FY67</u>	<u>FY68</u>	<u>FY69</u>	<u>FY70</u>
FYFS&FP	-	19	56	72	72	72
Objectives	-	19	56	72	72	72

Mission Requirements:

a. Primary mission is the transport of assault cargo. The 8000 lb. payload and the 150 knot cruise speed provide a rapid means of moving the bulky and heavier items required in the assault phase of an amphibious operation:

b. Secondary mission is the transportation of assault troops. The CH-53A can carry 35 troops in a single lift.

Basis of Force Levels in the Approved FYFS&FP:

To provide the required lift capability to transport the heavy, bulky items in support of the assault elements of two RLT's in each Fleet Marine Force.

Basis of Force Levels in the Program Objectives:

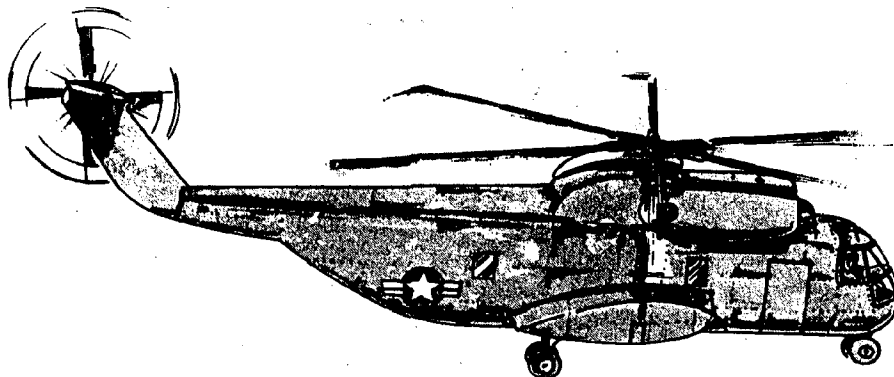
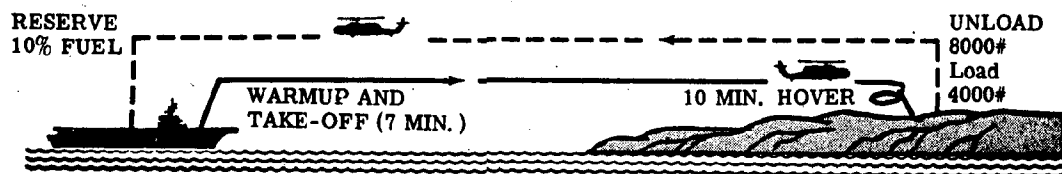
The assault elements of two RLT's in each of the two Fleet Marine Forces consist of 425 short tons of cargo/equipment and about 5,500 troops. To enable these assault elements to move ashore in the required 60 to 90 minutes, 72 Heavy Helicopters CH-53A, are required to lift the larger, heavier items.

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**CH-53A**

SEA STALLION

**SIKORSKY****MISSION PROFILE(S)****FEATURES**

CREW OF THREE, SELF SEALING FUEL TANKS, AUTOMATIC BLADE FOLDING,  
 INTEGRATED CARGO LOADING, ACCOMMODATES 30 TROOPS OR 24 LITTERS,  
 AUTOMATIC FLIGHT CONTROL, EXTERNAL CARGO HOOK, EMERGENCY WATER  
 LANDING CAPABILITY.

II-V-21-26

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1 May 1964

O-1B/CDescription:

The O-1B/C is a light two place observation and liaison aircraft capable of wire laying, spotting and reconnaissance missions in the VMO's.

Basis of Marine Corps Force Levels:

	<u>FY65</u>	<u>FY66</u>	<u>FY67</u>	<u>FY68</u>	<u>FY69</u>
FYFS&FP	10	-	-	-	-
Objectives	10	-	-	-	-

Basis of Force Levels in the Approved FYFS&FP:

To maintain sufficient O-1B/C aircraft to allow each of the three VMO squadrons to operate at or near the allowance of 24 aircraft until UH-1E introduction is completed.

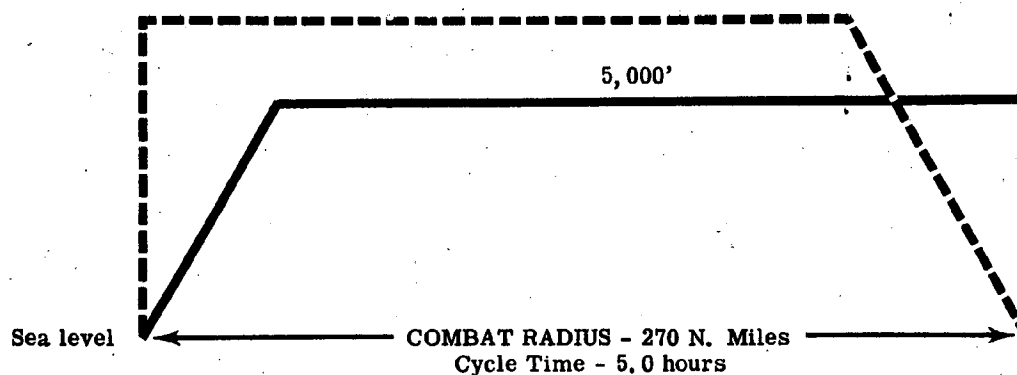
Basis of Force Levels in the Program Objectives:

Same as above

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II-V-2 -27

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**O-1B/C****BIRD DOG****CESSNA****MISSION PROFILE (S)****FEATURES**

High Wing, two-place, single engine, monoplane which provides front-line reconnaissance observation, casualty evacuation and utility services.

II-V-2-28

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1 May 1964

OH-43DDescription:

The OH-43D is an observation and utility helicopter performing evacuation, wire laying, reconnaissance and spotting missions.

Marine Corps Force Levels:

	<u>FY65</u>	<u>FY66</u>	<u>FY67</u>	<u>FY68</u>	<u>FY69</u>
FYFS&FP	12	-	-	-	-
Objectives	12	-	-	-	-

Mission Requirements:

The OH-43D is required to provide the observation, spotting, wire laying and general liaison/utility missions required by a Marine Division in the assault. The OH-43D is being replaced by the UH-1E which has improved performance.

Basis of Levels in Approved FYFS&FP:

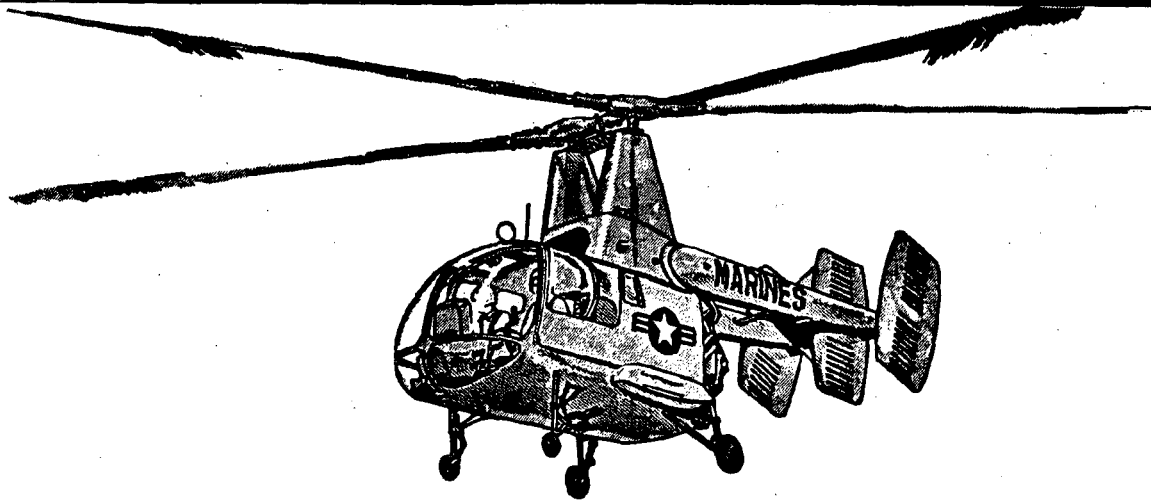
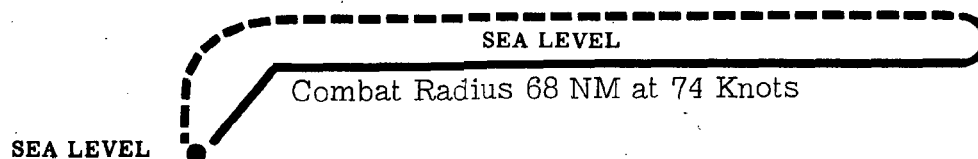
Retention of sufficient OH-43D to allow each of the threeVMO squadrons to operate at or near the allowance of 24 aircraft until UH-1E introduction is completed.

Basis of Force Levels in the Program Objectives:

Same as above



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**OH-43D****KAMAN****MISSION PROFILE (S)****FEATURES**

Two side-by-side intermeshing main rotors, reciprocating engine, personnel hoist, external cargo and internal litter fittings. Crew of two can carry two litter patients.

II-V-2-30

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**CONFIDENTIAL**

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UH-1E (IROQUOIS)Description.

A seven place light utility helicopter with a crew of one. A conventional main rotor-tail rotor helicopter built by Bell and powered by one T-53 Lycoming gas turbine engine, capable of lifting 800 lbs for a radius of over 100 n. m.

Marine Corps Force Levels.

	<u>FY65</u>	<u>FY66</u>	<u>FY67</u>	<u>FY68</u>	<u>FY69</u>	<u>FY70</u>
FYFS&FP	46	72	72	72	72	72
Objectives	48	72	72	45	36	36

Mission Requirements.

This light helicopter has the mission of command liaison, observation, reconnaissance, casualty evacuation, radiological survey, wire laying, spotting and light logistic support.

Basis of Force Levels in the Approved FYFS&FP.

The FYFS&FP provides for three 24-plane VMO squadrons. Twenty-four UH-1E will provide the VMO support required by one Marine Division in the field.

Basis of Force Levels in the Program Objectives.

To provide two squadrons in FY-65 and the third by FY-66. The 24-plane UH-1E VMO squadron is based on the recommendations of CMCLFDA stating that 24 light helicopters are required to support one deployed division. Ref. MCLFDA Proj. No. 70-59-09, Subj: Marine Corps Helicopter Requirements. The 24 aircraft requirement will remain until FY-68 when the OV-10A is introduced into the VMO squadron, and will absorb 66% of the VMO mission requirement.

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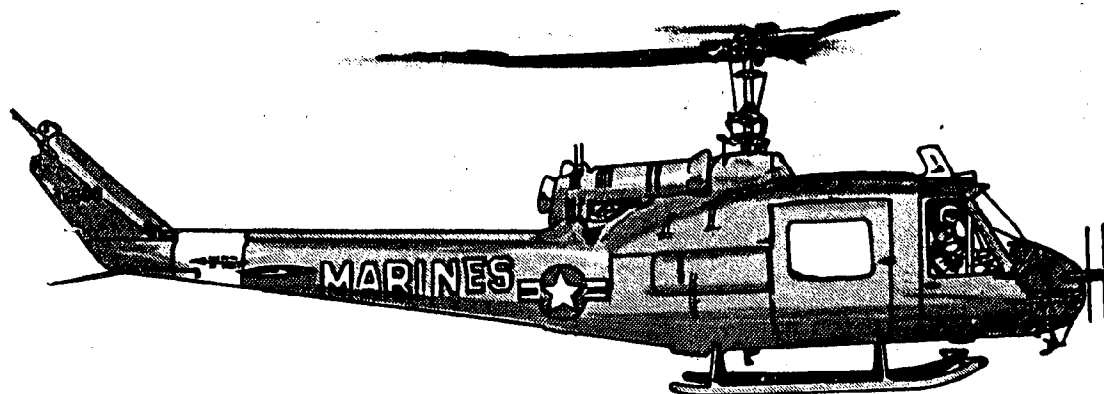
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UH-1E

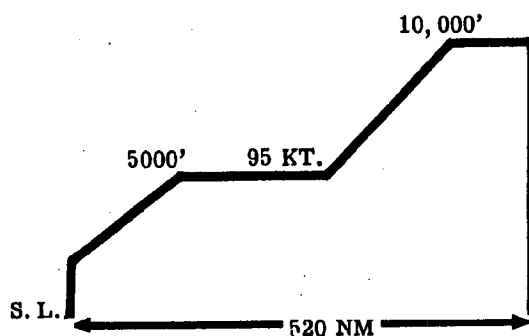
IROQUOIS

BELL

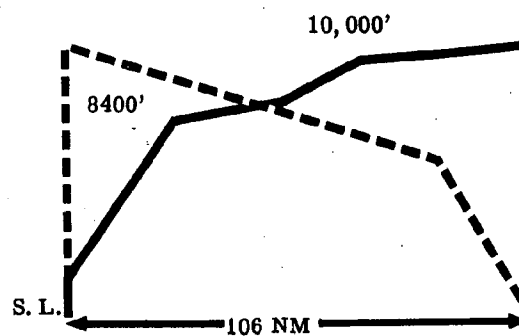


## MISSION PROFILE(S)

FERRY INT./EXT. FUEL



OVERLAND TRANSPORT



## FEATURES

CREW OF ONE. MARGINAL WEATHER/LIMITED NIGHT OPERATIONS.

ACCOMMODATIONS FOR AT LEAST 5 PASSENGERS OR 2 LITTERS AND

1 MEDICAL ATTENDANT.

II-V-2-32

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1 May 1964

RF-8A (CRUSADER)Description:

The RF-8A is a photographic reconnaissance version of the F8A.

Marine Corps Force Levels:

	<u>FY65</u>	<u>FY66</u>	<u>FY67</u>	<u>FY68</u>	<u>FY69</u>
FYFS&FP	27	12	-	-	-
Objectives	27	12	-	-	-

Mission Requirements:

Provide general day photographic reconnaissance, beach and amphibious mapping and limited night photography.

Basis of Force Levels in Approved FYFS&FP

Provides 9 RF8A per Division/Wing Team until the all-weather, multi-sensor RF-4B begins one-for-one replacement in FY66.

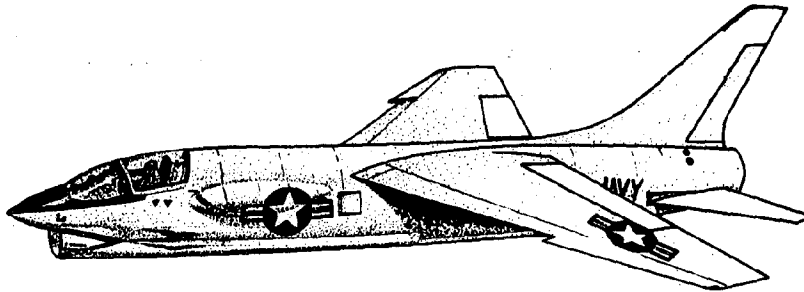
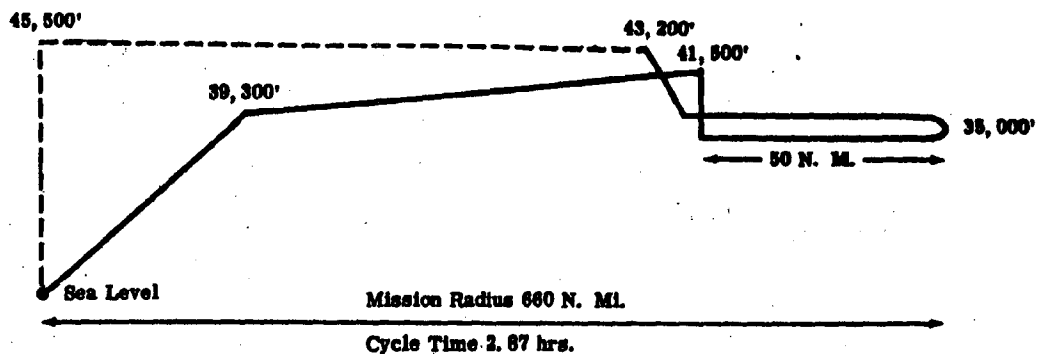
Basis of Force Levels in Program Objectives

To retain sufficient RF-8A to provide a total of 9 per Wing until replaced by the RF-4B.

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II-V-2-33

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**RF-8A****CRUSADER****CHANCE VOUGHT****MISSION PROFILE (S)****FEATURES**

The RF8A is a single place photographic and reconnaissance aircraft. It is a version of the F8A with an extended nose section to accommodate photographic equipment. The RF8A is capable of operating from land bases and all classes of attack carriers. It is also capable of in-flight refueling for extended missions.

II-V-2-34

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EF-10B (SKY KNIGHT)Description:

Twin engine, two place jet fighter of the early 1950s configured as a tactical ECM aircraft.

Marine Corps Force Levels:

	<u>FY65</u>	<u>FY66</u>	<u>FY67</u>	<u>FY68</u>	<u>FY69</u>	<u>FY70</u>
FYFS&FP	18	18	12	6	3	-
Objectives	18	18	18	14	4	-

Mission Requirement:

- a. Support strike aircraft and ground troops by suppressing enemy electronic detection and fire control systems.
- b. Obtain electronic intelligence within the combat area utilizing detecting, locating, classifying and recording techniques.

Basis of Force Levels in the Approved FYFS&FP

With the procurement of 12 EA6A OSD directed the phase out of the EF-10B.

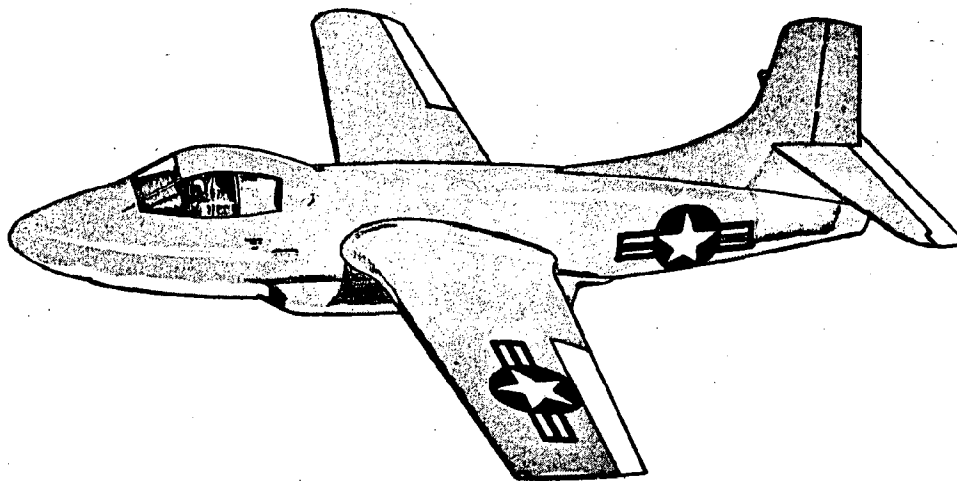
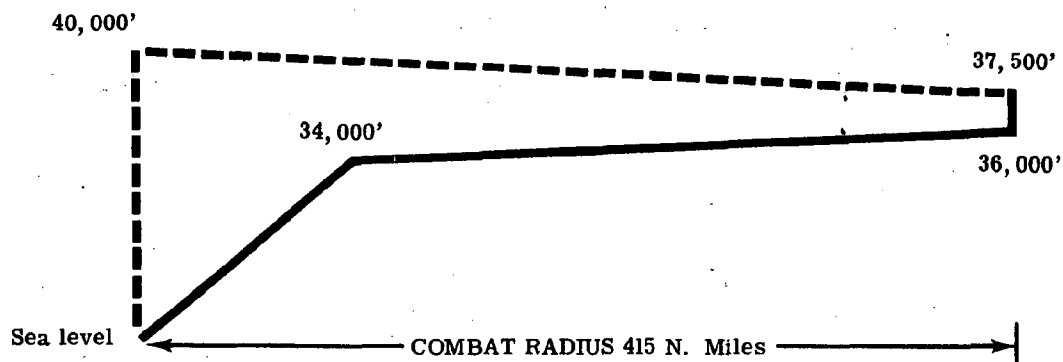
Basis of Force Levels in the Program Objectives:

The program objective is to retain 18 EF-10B in two of the Wings until the EF-6B procurement is available. This will retain the structure and trained personnel to furnish a nucleus for the EA-6B introduction. The nine electronic warfare aircraft programmed per wing are required to furnish the electronic warfare support required in a division/wing team operation.

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II-V-2-35

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**EF10-B****SKY KNIGHT****DOUGLAS****MISSION PROFILE (S)****FEATURES**

THE EF-10B IS A TWO PLACE, TWIN ENGINE, STRAIGHT WING, ALL-WEATHER, ELECTRONIC WARFARE AIRCRAFT. HAS THE CAPABILITY OF CONDUCTING BOTH ACTIVE AND PASSIVE ELECTRONIC COUNTERMEASURES.

II-V-2-36

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RF-4B (PHANTOM II)Description:

This is a multi-sensor all-weather reconnaissance version of the Mach 2.25 F4B. The reconnaissance system includes photographic, infra-red (IR) and side looking radar (SLR) sensors.

Marine Corps Force Levels

	<u>FY-65</u>	<u>FY-66</u>	<u>FY-67</u>	<u>FY-68</u>	<u>FY-69</u>	<u>FY-70</u>
FYFS&FP	0	15	27	27	27	27
Objective	0	15	27	27	27	27

Mission Requirements:

Conduct all-weather aerial multi-sensor imagery reconnaissance in support of Fleet Marine Force operations. This mission includes permanent imagery reconnaissance of front lines, lines of communication, helicopter zones and routes, beach areas, pre-strike and post-strike reconnaissance plus combat mapping.

Basis of Force Levels in the Approved FYFS&FP

The 27 RF-4B provides each Division/Wing Team with nine all-weather reconnaissance aircraft for all-weather reconnaissance of the objective area during the amphibious assault.

Basis of Force Levels in the Program Objectives:

Nine RF-4B's per Wing will provide all-weather photographic, infra-red and electronic reconnaissance which includes:

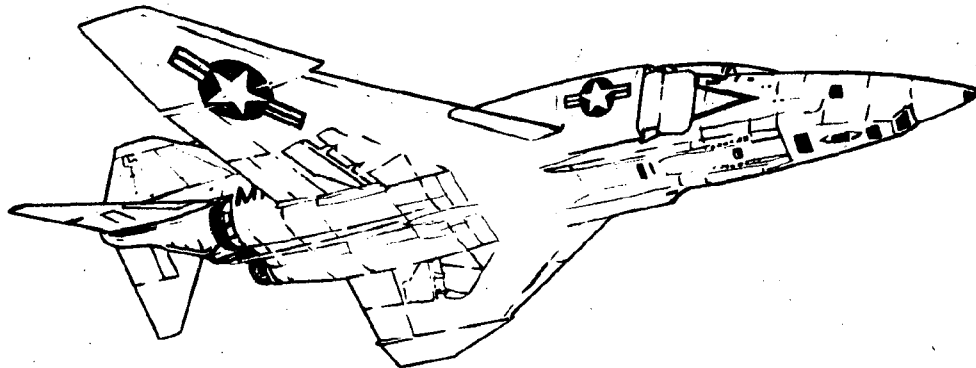
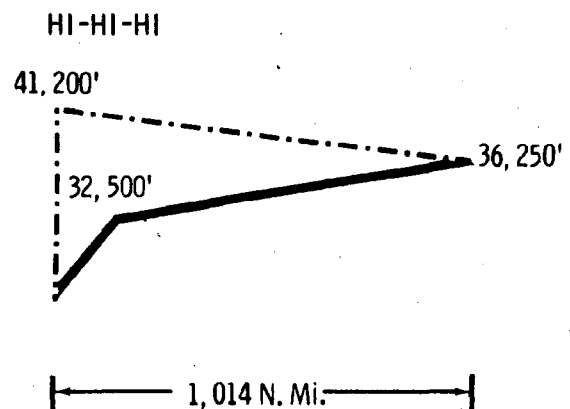
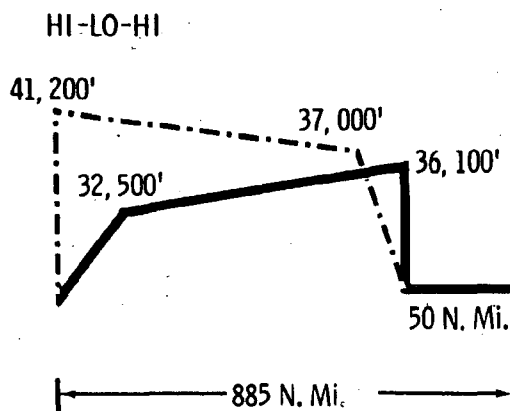
1. Detailed coverage of enemy territory to the immediate front of the Forward Edge of the Battle Area (FEBA).
2. Surveillance of enemy lines of communications to a distance of up to 600 miles.
3. Pre-Strike and post-strike coverage of specific targets.
4. Combat mapping.
5. Coverage of helicopter landing areas and approach and retirement routes.
6. Coverage of critical terrain features, beach areas, bridges, fords, etc.

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**RF-4B (F4H-1P)****PHANTOM II****McDONNELL****MISSION PROFILE(S)****FEATURES**

CREW OF TWO, PANORAMIC AND FRAMING CAMERAS, OPTICAL CORRELATED SIDE-LOOKING RADAR, INFRA-RED MAPPER, FORWARD-LOOKING RADAR. DATA ANNOTATION ON ALL FILM, INERTIAL NAVIGATION, HF COMMUNICATION SET, OPTIONAL IN-FLIGHT FILM PROCESSING. CARRIER AIRCRAFT WITH PERFORMANCE COMPARABLE TO F-4B.

II-V-2-38

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EA-6A/EA-6B (INTRUDER)Description:

The EA-6A is an electronic warfare aircraft adapted from the A6A airframe. The EA-6B is the follow-on aircraft with improved electronics. This aircraft is capable of locating, analyzing and jamming hostile electromagnetic radiation emitters.

Marine Corps Force Levels:

	<u>FY-65</u>	<u>FY-66</u>	<u>FY-67</u>	<u>FY-68</u>	<u>FY-69</u>	<u>FY-70</u>
FYFS&FP	9	9	9	9	9	9
Objectives	9	9	9	13	23	27

Mission Requirements:

The EA-6A/B is required to:

- a. Support strike aircraft and ground troops by suppressing enemy electronic detection and fire control systems.
- b. Obtain electronic intelligence within the combat area utilizing, detecting, locating, classifying and recording techniques.
- c. Destroy certain enemy radar and fire control systems with SHRIKE missiles (anti-radiation weapon).

Basis of Force Levels in the Approved FYFS&FP:

The current approved force level of nine aircraft are the result of the Secretary of Defense decision of 2 October 1963 which reduced the requested force levels for EA-6A's from 27 to 9. In addition to the 9 EA-6A's, 18 EF-10B's are provided for Electronic Warfare missions. This total of 27 EA-6A/EF-10B aircraft provide nine Electronic Warfare aircraft in each Wing.

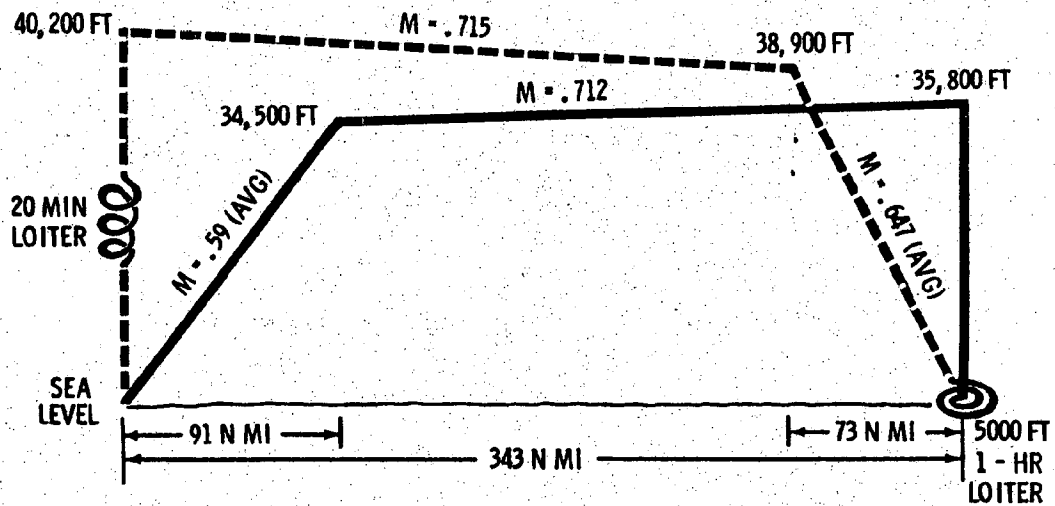
Basis for Force Levels in the Program Objectives:

The indicated force level will provide 18 EA-6B's to replace the 18 EF-10B's. The EF-10B's are over 10 years old and may be in unacceptable materiel condition by FY-1968. Their flight performance is not compatible with current aircraft and their electronics equipment is inadequate to perform the minimum electronic warfare functions.

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**EA-6A****INTRUDER****GRUMMAN****MISSION PROFILE[S]****FEATURES**

CREW OF TWO. CAPABLE OF TAKEOFF OVER A 50 FT. OBSTACLE IN APPROXIMATELY 4,360 FT. AND LANDING OVER A 50 FT. OBSTACLE IN APPROXIMATELY 2,450 FT. CAN CARRY UP TO 5 EXTERNAL TANKS OR STORES. PRIMARY MISSION IS THE DETECTION AND JAMMING OF ENEMY ELECTRONIC EMITTERS OVER A WIDE SPECTRUM. ALSO RETAINS VISUAL ATTACK AND AUSTERE ALL-WEATHER SPECIAL WEAPONS DELIVERY CAPABILITY.

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E-2A (HAWKEYE)Description:

This is a Carrier/SATS based Airborne Early Warning aircraft capable of radar detection of airborne aircraft. It is also capable of controlling friendly fighters for the intercept and destruction of enemy aircraft.

Marine Corps Force Levels:

	<u>FY-69</u>	<u>FY-70</u>	<u>FY-71</u>	<u>FY-72</u>
FYFS&FP	-	-	-	-
Objectives		9	18	27

Mission Requirement:

The E-2A is required in an amphibious operation for:

- a. Establishing an airborne surveillance and air defense capability over the beachhead during early stages of the assault landing prior to the establishment of shore based radar detection and air control facilities.
- b. Extending the detection and early warning ranges of ground-based radar systems.
- c. Acquiring a detection and intercept capability against low flying aircraft which penetrate the beachhead beneath the coverage of ground-based radars.

Basis of Force Levels in the Approved FYFS&FP:

There are no E-2A's in the presently approved FYFS&FP due to a current lack of adequate "overland" detection capability in the aircraft radar systems. This capability is estimated to be available by FY-1967.

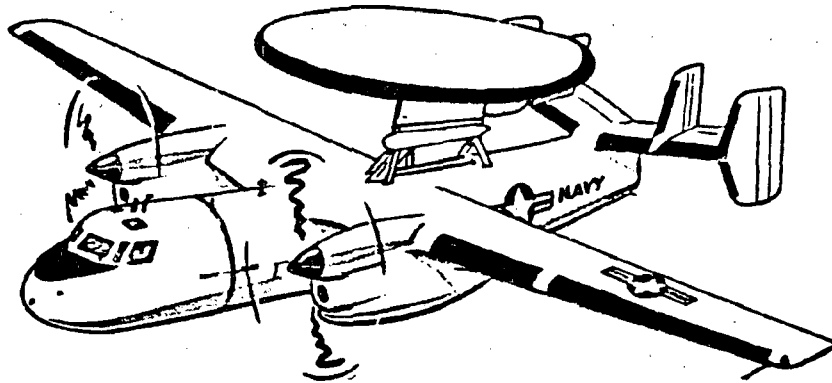
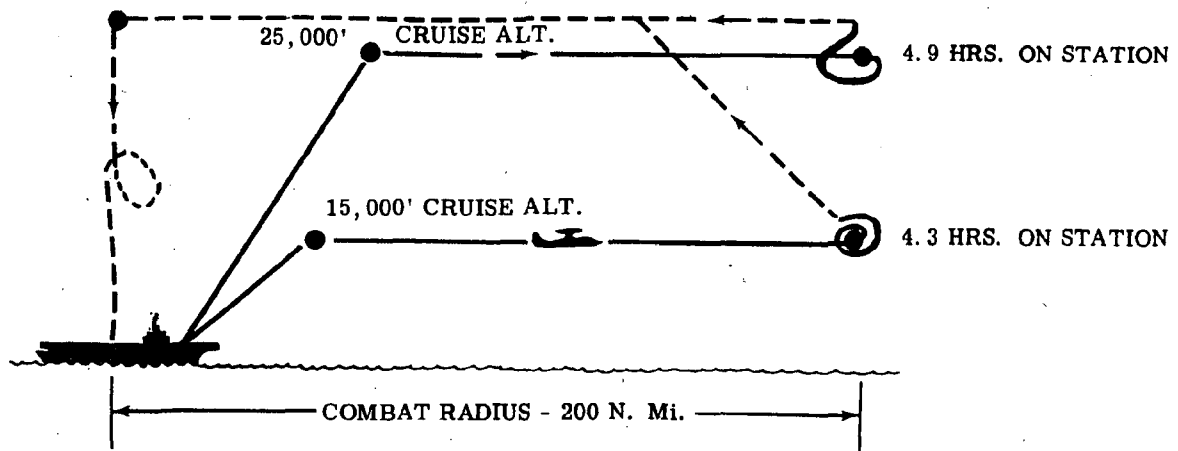
Basis of Force Levels in the Program Objective:

The indicated force levels will provide, by FY-1971, one nine-plane E-2A squadron in each of three Marine Aircraft Wings. Nine aircraft are required in each squadron in order to provide the airborne early warning required during MEF operations.

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**E-2A (W2F-1)****GRUMMAN****MISSION PROFILE(S)****FEATURES**

CREW OF FIVE. CAPABLE OF ALL-WEATHER CARRIER OPERATION, WITH UHF RADAR PROVIDING RADAR TARGET RANGE OF 175 TO 190 NAUTICAL MILES, 24-FOOT ROTODOME MOUNTED ON FUSELAGE, PRESSURIZED CREW AREA, COMPLETE DATA LINK SYSTEM (AIR-TO-SURFACE AND INTERCEPTOR CONTROL), SIMULTANEOUS HEIGHT FINDING AND SEARCH CAPABILITY, DOPPLER INERTIAL NAVIGATION SYSTEM, AUTOMATIC TACTICAL DATA PROCESSING SYSTEM.

II-V-2-42

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MISSION SUPPORT AIRCRAFTDescription:

Mission Support Aircraft include transport, two-placed jet trainers, two-place prop trainers, and other utility aircraft attached to HQMC, HQ Fleet Marine Force, Marine Air Bases, and MCS, Quantico.

Marine Corps Force Levels:

	<u>FY66</u>	<u>FY67</u>	<u>FY68</u>	<u>FY69</u>	<u>FY70</u>	<u>FY71</u>
FYFS&FP	87	84	75	61	43	39
* Objectives	85	85	84	84	84	84

Mission Requirements:

Provide logistic and administrative support that is responsive to the needs of the Commanders of Air Stations, Fleet Marine Forces, HQMC, and MCS, Quantico. In addition, provide the combat readiness training necessary to maintain staff pilot proficiency.

Basis of Force Levels in the Approved FYFS&FP:

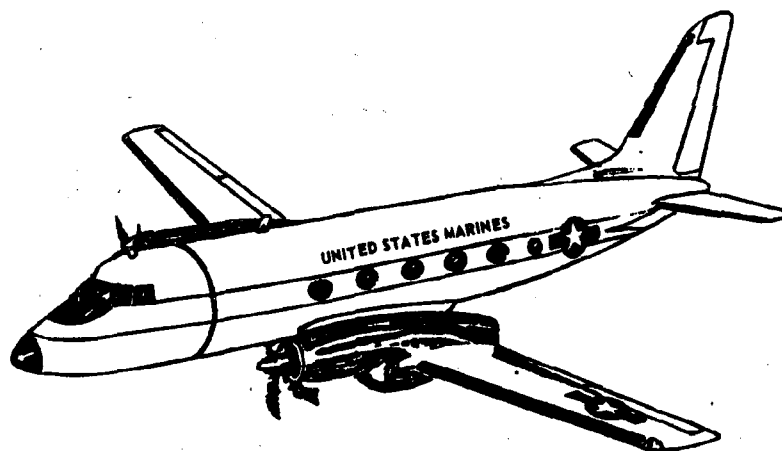
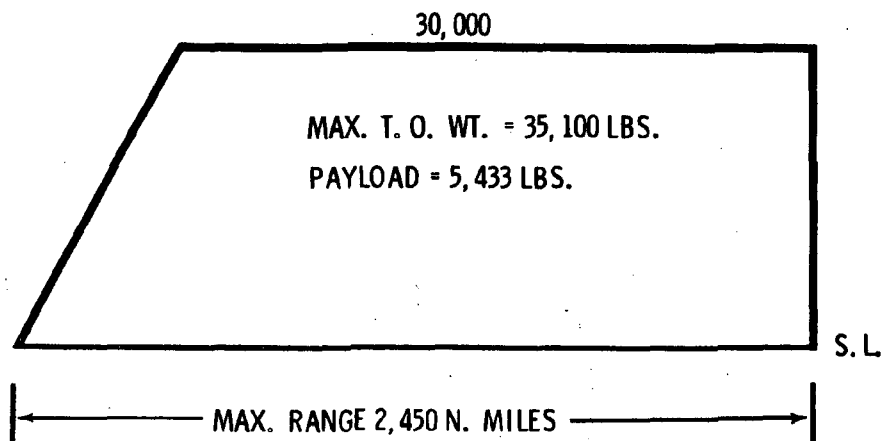
The number of mission support and proficiency aircraft assigned in the F&FS&FP declines in each successive year due to normal attrition. The Secretary of Defense has not approved any replacement for these aircraft. On 23 December 1963, a separate Format B which addressed mission support aircraft for the USAF, U. S. Army and Navy/Marine Corps further reduced the total Navy/Marine inventory. OSD's Format B dated 19 December 1964 on the mission support aircraft study replaced most of the force level of old aircraft but still disapproved new procurement. No approval for new procurement is expected until after completion of and OSD decision on another mission support aircraft study.

Basis for Force Levels in the Program Objectives:

The Program Objective is to maintain mission support aircraft at a level necessary to adequately support the approved force structure. This level provides for an adequate utilization of all mission support aircraft, and also provides each pilot requiring Combat Readiness Training (CRT) a minimum of 90 hours per year.

\* Subject to change after OSD decision on the 1965 Mission Support Aircraft Study

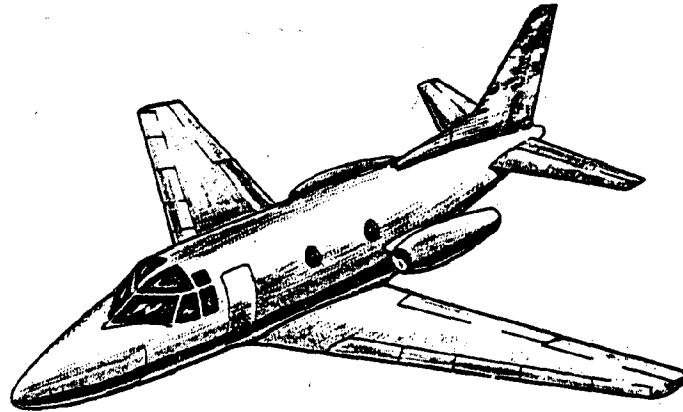
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**C-4B****GULFSTREAM****GRUMMAN****MISSION PROFILE(S)****FEATURES**

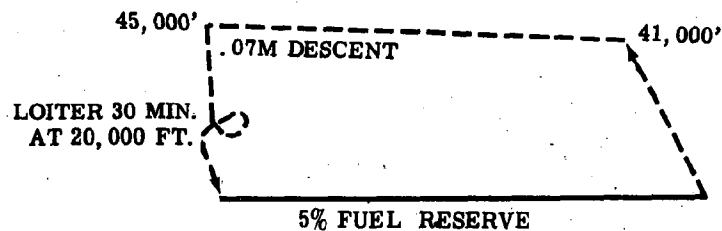
The Gulfstream is a 10-24 passenger pressurized light transport which is powered by two Rolls-Royce Dart turboprop engines. T. O. run: 4,370 ft. Landing roll: 2,680 ft. Service ceiling: 36,000 ft. Has toilet compartment with hot and cold water.

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**T-39A****NORTH AMERICAN****MISSION PROFILE(S)****EXTENDED RANGE MISSION SUPPORT**

VCRUISE 436 Kts/.76M  
43,600 FT.

**FEATURES**

The T-39A is a utility version Sabreliner powered by two Pratt & Whitney J60-P-3 turbojet engines (3,000 lb. static thrust each). It has accommodations for a crew of two and 4-8 passengers in a pressurized air-conditioned cabin or 2,500 lb. of freight with seats removed. T.O. run: 2,500 ft. Landing run: 1,850 ft. Max. range, with reserve: 1,950 miles.

II-V-2-45

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(REVERSE PLANK)



## WEAPONS (excluding aircraft)

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1 March 1965

LIGHT AA MISSILE BATTALION(HAWK)Description:

The Marine Light AA Missile (LAAM) Battalion consists of one Headquarters and Service Battery and four Missile Batteries. Although each Missile Battery is capable of independent action, control and coordination of missile fires is normally effected by a Battalion Operations Center which is in continuous contact with a Tactical Air Operations Center of a Marine Air Control Squadron. In this manner, an integrated air defense capability is provided through the contribution of surface-to-air missiles and interceptor aircraft under a single control and coordination system.

The Headquarters and Service Battery contains the control, communication, maintenance, logistic, and supply facilities required for support of the four Missile Batteries.

Each of the four Missile Batteries possesses the following major items of HAWK system ground equipment:

1-Battery Control Central	6-Launchers(3 launch arms each)
1-Pulse Acquisition Radar	5-Loader Transporters
1-CW Acquisition Radar	5-Generators
1-Range Only Radar	1-Missile Test Shop
2-CW Illuminator Radars	12-Trailers,Pallet, Missile(3 storage arms each)

\*Unit of Fire Per Missile Battery: 36 missiles

The characteristics of the HAWK missile are as follows:

<u>Weight:</u> 1295 lbs	<u>Warhead:</u> 114 lbs HE
<u>Length:</u> 16.5 feet	<u>Motor:</u> 2-stage solid
<u>Diam:</u> 14 inches	<u>Velocity:</u> Mach 2

System capabilities are as follows:

Mobility: Comparable to medium artillery; a missile battery can be emplaced in 30-60 minutes from arrival at a position area, march order in 30-45 minutes, and travel at convoy speeds in excess of 30 miles per hour on improved roads.

Raid Capacity: Two simultaneous raids per each missile battery; eight simultaneous raids per battalion.

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Intercept Range: 1.6 - 16.5 nautical milesIntercept Altitude: 0 - 45,000 feetTarget Radial Velocity: 88 - 888 knotsSingle Shot Kill Probability(SSKP): 0.6

Fire Power: 18 ready missiles per Missile Battery (6 launchers); ripple fire at five second intervals at any given raid.

Marine Corps Force Levels:

	<u>FY-65</u>	<u>FY-66</u>	<u>FY-67</u>	<u>FY-68</u>	<u>FY-69</u>	<u>FY-70</u>
<u>Battalions</u>						
FYFS&FP	4	4	4	4	4	4
Objectives	4	4	4	4	4	4
<u>Missiles</u>						
FYFS&FP	1300	1572	1644	1584	1524	1464
Objectives	1300	1572	1644	1584	1524	1464

Mission Requirements:

The Marine Light AA Missile Battalion is required to provide all-weather, surface-to-air missile defense of assigned areas of operation, or installations and vital zones therein, against hostile low and medium altitude air attacks.

Basis of Force Levels in the Approved FYFS&FP:

Battalions: Three Light AA Missile Battalions are required in support of the three operational Division/Wing Teams of the Marine Corps. The fourth battalion is a maintenance cadre only, with H&S Battery augmentation and four Missile Battery organizations(equipment is available) to be provided upon mobilization of organized reserve units. The Secretary of Defense has approved the Marine Corps program objective of providing each of the three operational Light AA Missile Battalions with four Missile Batteries commencing FY-1966. The increase in Marine Corps personnel involved is as follows:

	<u>FY-66</u>	<u>FY-67</u>	<u>FY-68</u>	<u>FY-69</u>	<u>FY-70</u>
OFF/ENL	13/305	13/324	13/324	13/324	13/324

The fourth missile battery is required in each operational battalion for the following reasons:

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a. To provide surface-to-air missile coverage, firepower, and mutual support required for reasonably adequate air defense of a typical Division/Wing Team area of operations. Adequate coverage, firepower, and mutual support is not afforded by a battalion of three missile batteries.

b. To provide the surface-to-air readiness posture required of the Light Air Missile Battalions in peacetime to permit their rapid deployment and effective use in emergency deployments. More realistic and better training results from the fourth battery being "on hand" as opposed to availability upon mobilization, and better protection of the Marine Corps investment in equipment is afforded.

The activation of three additional Missile Batteries, coupled with reorganization of the reserves effective 1 July 1965, will result in the existence and location of units as follows:

<u>Unit</u>	<u>#Msl Btrys</u>	<u>Location</u>
1st LAAM Bn(-)	3	WESTPAC
"D" Btry, 1st LAAM	1	MCB 29 Palms
2nd LAAM Bn	4	MCB 29 Palms
3rd LAAM Bn	4	MCAS Cherry Point
4th LAAM Bn USMCR		
Maint Cadre	N/A	MCB 29 Palms
H&S Btry(-)	N/A	Pasadena
"A" Btry	1	Pasadena
"B" Btry	1	San Jose
"C" Btry	1	San Jose
"D" Btry	1	Fresno

Missiles: The last HAWK missiles for Marine Corps use were procured in FY-1964, with deliveries to be completed in FY-1966. No further procurement of missiles is anticipated. The HAWK system currently in use is expected to be obsolete in the early 1970's. There are adequate missiles on hand, or soon to be delivered, to sustain combat until further requirements can be produced. Training firing expenditures (60 per year through FY-65, 80 per year thereafter) have been considered. The quantity and total cost of missile procurement has been as follows:

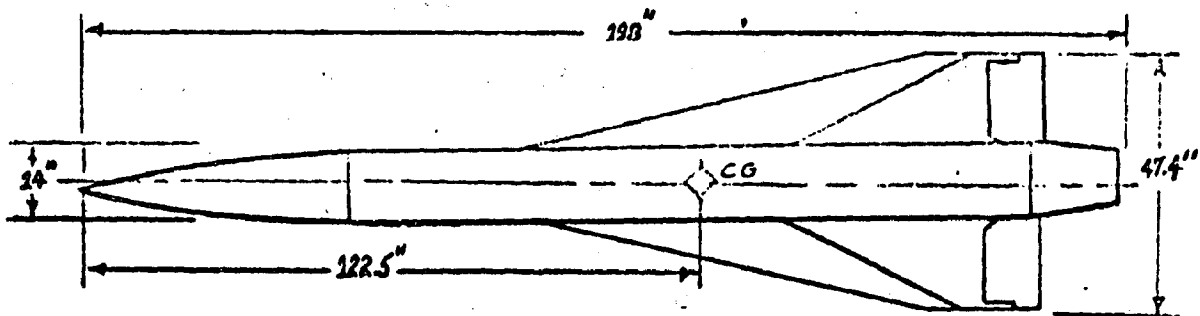
	<u>FY-63&amp;Prior</u>	<u>FY-64</u>	<u>FY-65&amp;Beyond</u>
quantity	1648	400	0
Cost(Millions)	80.7	12.0	0

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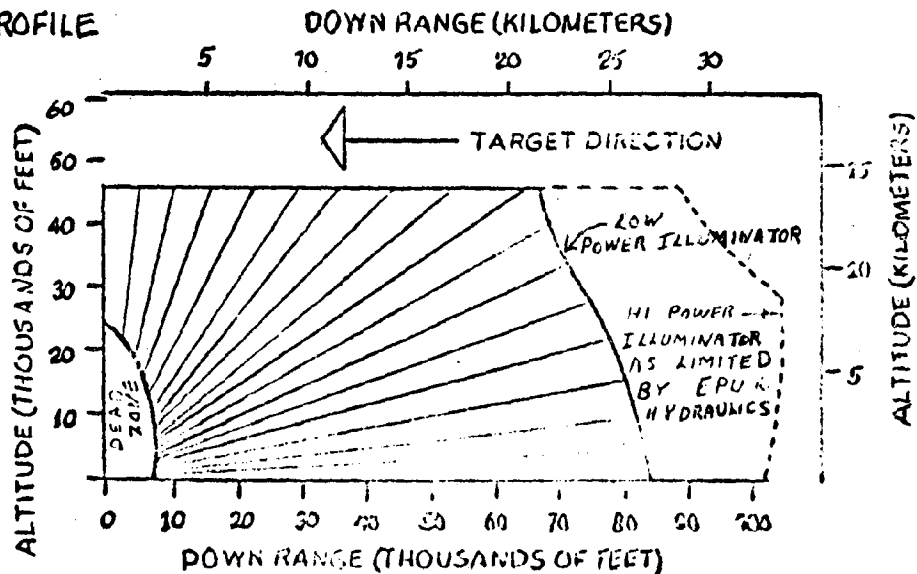
MIM-23A

HAWK

RAYTHEON



## MISSION PROFILE



## FEATURES

THE MIM-23A "HAWK" IS A CW, SEMI-ACTIVE, HOMING-ALL-THE-WAY GUIDED MISSILE SYSTEM POSSESSING THE UNIQUE CAPABILITY OF EFFECTIVELY ENGAGING LOW ALTITUDE ATTACK AIRCRAFT. THE BASIC SYSTEM IS HIGHLY MOBILE, READILY EMPLACED AND DISPLACED, AIR TRANSPORTABLE BY C-130 TYPE AIRCRAFT, AND HELICOPTER TRANSPORTABLE BY CH-37C OR LARGER CRAFT. ONCE EMPLACED, A COMPLETE BATTERY OF HAWK IS OPERABLE BY JUST FIVE (5) FIRE CONTROL PERSONNEL.

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PROGRAM FOR CLASS VA (AVIATION ORDNANCE) BACKGROUND

a. As a result of post Korean War rapid transition to high sub-sonic jet attack aircraft and a preoccupation with achieving a high state of tactical nuclear capability, the Berlin Crisis of 1961 and the Cuban Crisis of 1962 found the Navy and Marine Corps stockpile of non-nuclear ordnance relatively obsolete and ineffective. In addition, the advent of the Multiple Carriage Bomb Rack (MCBR) made previously adequate stocks alarmingly low as this development made it possible to deliver six times as much ordnance per sortie as was possible with Korean type jet aircraft. OSD directed the Secretary of the Navy to prepare a study to support the 64 FYFS&FP for a phased procurement of more effective modern non-nuclear ordnance. The resulting "U.S. Navy (including Marine Air) Combat Consumable Requirements for Non-Nuclear War"(1963) became the accepted methodology and back up data for the computation of Class VA requirements subject to OSD Logistic Guidance.

b. Air To Surface Weapons - Rationale for Air to Surface Weapons is based on the premise that greater numbers of targets exist in any war than there are available sorties. Therefore ordnance requirements are based on a level of effort (Sortie Rate) consistent with assigned force levels, attrition rates, and the ability of aircraft to carry ordnance (Rack Factors). Ordnance items are selected based on their individual effectiveness on the basis of passes required per kill (to reduce vulnerability.) The following table is used to illustrate selected programming objectives computational data.

	<u>A6A</u>	<u>A4E</u>	<u>F4B</u>	<u>F8E</u>
1. Sorties/month				
a. Navy	29.4	28.6	10	10
b. Marine	35.7	34.2	6	6

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	<u>A6A</u>	<u>A4E</u>	<u>F4B</u>	<u>F8E</u>
2. Racks Available	5	5	9	4
Fuel	1	1	1	0
Ordnance	4	4	4	2
Missiles			4	2
3. Preferred Weapons				
a. SNAKEYE MK-83	2.67	2.84	3.06	3.30
b. SNAKEYE MK-81		.55	.22	.10
c. LD Bomb MK-84			.41	
d. Rockeye	1.25	1.10	1.32	1.17
e. Sadeye/Gladeye	.11	.03	.13	.06
f. CBU-1	.06	.02	.07	.02
g. Zuni Pods	.07	.41	.47	.37
h. Bullpup A		.09		
i. Bullpup B	1.23			.58
j. Shrike	.05	.05	.05	.07
k. Walleye	1.32	.99	1.99	

c. Chemical Weapons - Chemical Weapons are programmed for as Special Purpose Weapons and do not degrade requirements for other nonnuclear weapons. Requirements are determined by FMF forwarded via the JCS and acted on by USN/USMC to support the stated Fleet requirements. For information, a brief description of chemical and biological agents under investigation are presented on pages II-v-3.

d. Air to Air Weapons - Air to Air Weapons are programmed to permit employment of approved force levels of fighter aircraft in any theatre in the Air to Air role until the threat (as defined in the current JSOP) is destroyed. Here the requirement is based purely on the threat numbers, weapons system capability and the contributions of other weapons systems efforts (SAM Kills,

## SECRET

Aircraft Destroyed on the ground by attack aircraft and, air to air kills by allied and Air Force Fighters) required to gain and maintain air superiority.

e. Present Stockpile - To provide an interim capability to fight a less effective (more sorties per target kill) war the following ordnance assets are available to Navy/Marine aircraft pending Fleet introduction of the more advanced weapons such as WALLEYE, FIREYE, BRITEYE etc:

MK 81 SNAKEYE. . . . .	21,685
MK 81 250# Bomb LD . . . . .	77,988
MK 82 500# . . . . .	62,953
MK 83 1000#. . . . .	55,449
MK 84 2000#. . . . .	9,913
100# GP Bomb HD. . . . .	147,214
250# GP. . . . .	145,470
500# GP. . . . .	72,940
220/260# Frag Bomb . . . . .	195,315
MK-77 Mod 0, MK-78 & MK-79 Fire Bomb . . .	12,654
MK-77 Mod 2 Firebomb . . . . .	1,654
2.75" FFAR . . . . .	1,074,779
5" FFAR (ZUNI) . . . . .	157,062
5" HVAR. . . . .	268,552
CBU-1A/A . . . . .	5,973
CBU-2A . . . . .	3,424
AGM-45A (SHRIKE) . . . . .	50
AGM-12B (BULLPUP A). . . . .	15,957
AIM-9B (SIDEWINDER IA) . . . . .	21,595
AIM-7D/7E (SPARROW III). . . . .	6,695



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These figures are correct as of a CNO inventory dated 26 February 1965. In addition to the ordnance tabulated above, a stockpile of Korean "iron bombs" is maintained for which no further procurement is planned.

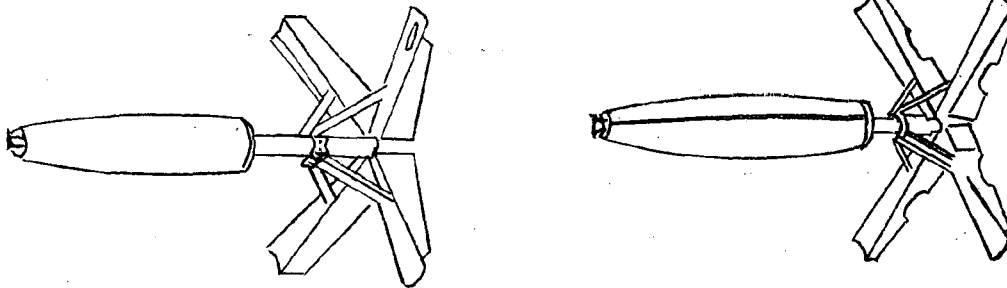
f. The following pages present brief descriptions of the items to be procured in the 1966-71 FYFS & FP. Some of the items listed are in procurement while others are in various phases of R&D. The latter will be phased into procurement when a low risk can be achieved. The status of individual weapons can be determined by referring to the weapon data sheet.

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9 March 1965

SNAKEYE I

The Snakeye I consists of the Mk 81 general-purpose low-drag bomb with the Mk 14 Mod 0 retarding tail assembly, and the Mk 82 general-purpose low-drag bomb with the Mk 15 Mod 0 retarding tail assembly. The purpose of the Snakeye I is to provide existing bombs with a retarding device to give jet attack aircraft a high-speed (600 knots) and low-altitude (100-150 feet) bombing capability without the normally associated danger from ricocheting bombs or fragments; to provide a high-drag or low-drag delivery capability that may be selected by the pilot; to reduce CEP and ensure target identification by allowing the pilot to retain the bomb longer and get nearer the target; and to employ instantaneous fuze settings that may be varied at the pilot's option and yet ensure delivery aircraft escape from blast and fragment pattern.

## CHARACTERISTICS

	MARK 81	MARK 82
Primary kill mechanisms	fragments and blast	
Weapon type	antimaterial and antipersonnel	
Payload fuzing	contact, delay or proximity	
Delivery	single or stick	
Weight, lb		
Total, loaded	295	571
Explosive (H-6)	96	192

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9 March 1965

SNAKEYE IProgram Element: 3 -- -- -- 2SOR No.: W 11-05Description and Performance: See Opposite PageUser Unit: Attack Squadrons - VMA, VMA (AW) and VMFAReplaces: High drag bombsAdvantages: Provides both high and low drag option for delivery for both the Mk-81 (250 lb) and the Mk-82 (500 lb) bombs.Status and Schedule: Both versions operationalRD&E Funding: (\$1000's by FY)

<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
-----------	-----------	-----------	-----------	-----------	-----------

Procurement: (\$1000's by FY) Source FYFS/P067

	<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
Mk-81		70/70	35/70	/60	/50	/37
Mk-82		70/70	20/70	/70	/70	/33

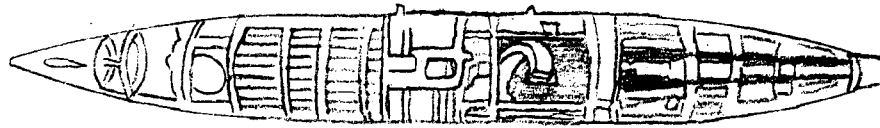
Cognizant Branch: AAW

II-V-3-11

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SECRET

8 March 1965

MARK 4 GUN POD

The Mk 4 Gun Pod is a self-contained and self-powered 20 mm gun system with a rate-of-fire of approximately 4,200 rounds per minute. The pod contains a double-barrelled Mk 11 gun, which uses Navy stockpiled Mk 100 series ammunition. The container is a low-drag cylindrical body with nose and tail cones attached. Belted ammunition is carried forward from the magazine through two feed chutes into the twin barrels, one belt entering from each side. The used belt links and cartridge cases are ejected from the rear of the gun, pass through two ejection ducts, and exit through the bottom of the container. A salient feature of the gun pod is the instantaneous peak rate-of-fire. The entire pod assembly is externally hung by two mounting lugs with 30-inch spacing, normally suspended from a standard Aero 7A ejector rack.

## CHARACTERISTICS

Primary kill mechanism	blast, fragments, or penetration (depending on whether HEI or API ammunition is used)
Weapon type	antimateriel and antipersonnel
Payload fuzing	contact
Range, yd	3,000
Firing rate, rounds/min	4,200 / 200
Delivery	strafe
Weight, lb	
Total, loaded	1,350
Total, empty	745
Payload (750 pounds)	584
Length, in.	196.7
Diameter, in.	22.5

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SECRET

8 March 1965

MARK IV Gun PodProgram Element:SOR No.: W11-05Description and Performance: See Opposite PageUser Unit: Attack Squadrons - VMA, VMA (AW) and VMFAReplaces: NoneAdvantages: High rate of fire gun pod system providing capability of air-to-ground strafing for A-4, A-6, A-7, and F-4 aircraft.Status and Schedule:RDT&E Funding: (\$1000's by FY) Source FYFS

<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
900	900	1200	1200	1200	1200

Procurement: (by FY)

<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
827	-	345	-		

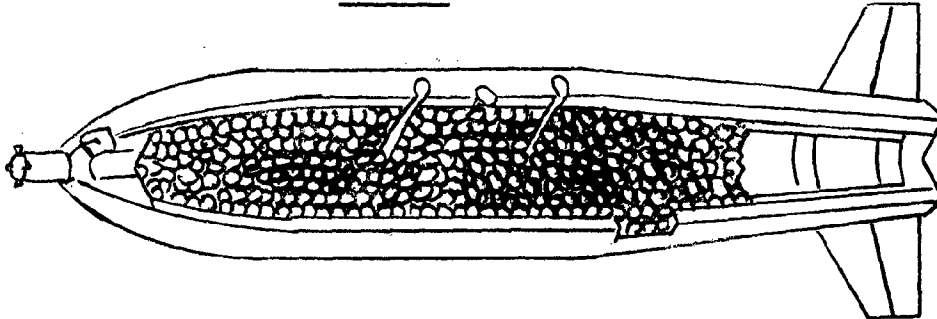
Cognizant Branch: AAW

II-V-3-13

SECRET

SECRET

8 March 1965

SADEYE

The Universal Dispenser, MK-5 Mod 0 (SADEYE) has been designed and developed to provide a delivery container for a large number of various types of clustered bomblets over a target area. It can carry and dispense a wide variety of anti-personnel and anti-material munitions, including BW/CW bomblets. A typical loading consists of 2100 M-40 anti-personnel grenades. After release from the delivery aircraft the dispenser splits in half and the bomblets are randomly distributed over an area approximately 1000 feet in diameter.

## CHARACTERISTICS

Primary kill mechanism	fragments
Weapon type	antipersonnel
Payload fuzing	contact
Delivery	single
Weight, lb.	
Total loaded	750
Total empty	159
Payload	590
Length in.	87
Diameter, in.	16
Fin Span, in.	30

II-V-3-14

SECRET

SECRET

8 March 1965

SADEYE - Universal DispenserProgram Element:SOR No.: W11-05Description: See Opposite PageUser Unit: Attack Squadrons - VMA, VMA (AW) and VMFAReplaces: NoneAdvantages: Provides an effective dispenser for various types of munitions.Status and Schedule: The dispenser is in production.RDT&E Funding: .(\$1000's by FY)

<u>64</u>	<u>65</u>	<u>66</u>
889	500	

Procurement: (by FY)

<u>64</u>	<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
0	0	1000	2000	2000	2000	2000

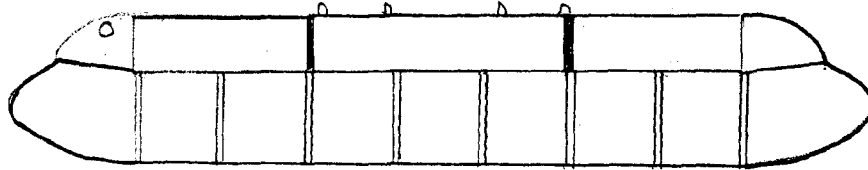
Cognizant Branch: AAW

II-V-3-15

SECRET

SECRET

8 March 1965

GLADEYE - Modular Dispenser

The MK 4 Mod 0 modular dispenser is an all purpose unit designed and developed for the delivery of small tactical devices such as LAZY DOG, CHAFF, LEAFLETS, and various type BOMBLETS from high performance aircraft. The dispenser consists of seven canisters which are ejected from the aircraft individually or at any of three preselected salvo intervals.

## CHARACTERISTICS

Primary kill mechanisms	fragments
Weapon type	antipersonnel
Payload fuzing	contact
Weight, lb.	
Strongback	178
Total, loaded	500-1,650
Total, empty	267
Canister, each, empty	12
Payload	varies
Length, in.	108.2

II-V-3-16

SECRET



SECRET

8 March 1965

GLADEYE - Modular DispenserProgram Element:SOR No.: W11-05DDescription and Performance: See Opposite PageUser Unit: Attack Squadrons - VMA, VMA (AW) and VMFAReplaces: NoneAdvantages: Provides high speed low level delivery canister for a variety of devices.Status and Schedule: GLADEYE has been release but is not in production.RDT&E Funding: (\$1000's by FY)64      65      66

109

Procurement: (by FY)64      65      66      67

Not authorized for production

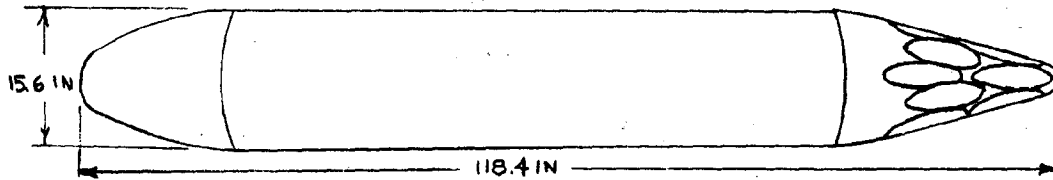
Cognizant Branch: AAW

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SECRET

15 March 1965

CBU WEAPONS

The CBU weapons were designed for low-level, high-speed delivery from jet attack aircraft. The dispenser for CBU weapons is designated SUU-7A/A Dispenser, Aircraft. It is cylindrical in shape with rounded nose and conical tail. Nineteen aluminum tubes are clustered within a strongback, of which either one, two, or three tubes of bomblets can be released simultaneously - the number being selected before flight.

## CHARACTERISTICS

## CBU-1A/A

Primary kill mechanism	fragments
Weapon type	antipersonnel
Payload fuzing	contact
Weight, lb	
Total, loaded	721.2
Total, empty	117.0
Payload	604.2

## CBU-2/A

Primary kill mechanism	fragments
Weapon type	antimateriel
Payload fuzing	contact
Weight, lb	
Total, loaded	780
Total, empty	117
Payload	663

## CBU-3/A

Primary kill mechanism	shaped charge
Weapon type	antitank
Payload fuzing	contact
Weight, lb	
Total, loaded	671
Total, empty	117
Payload	554

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## CBU WEAPONS

Program Element: 3 -- -- -- 2SOR No: W11-05Description & Performance: See opposite pageUser Unit: Attack Squadrons VMA, VMA(AW) and VMFAReplaces: None, additional capabilityAdvantages: Provide large area coverage of small bomblets.

Status & Schedule: CBU-1 and 2, operational and stockpiled, procurement complete. CBU-3 in production. Development of more effective dispenser/ bomblet combinations in progress.

RDT&E FUNDING: (\$1000's by FY)

<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>	<u>71</u>
-----------	-----------	-----------	-----------	-----------	-----------

Procurement: (by FY)

<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>	<u>71</u>
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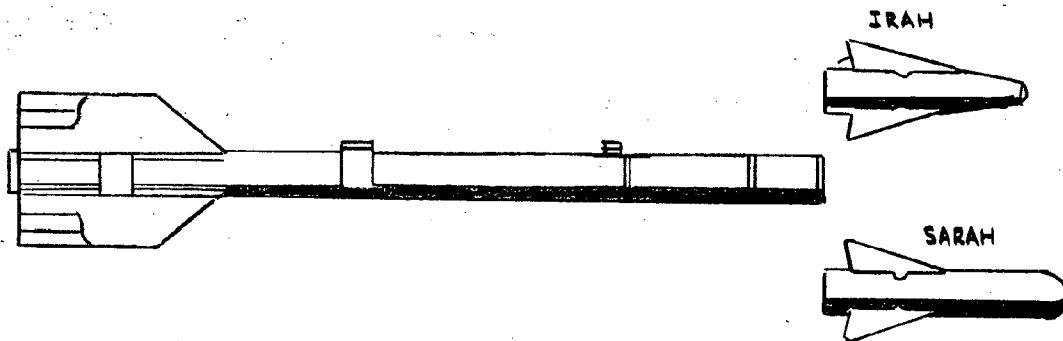
CBU-3	2000
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II-V-3-19

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## SIDEWINDER - AIM-9



The SIDEWINDER system consists of two missiles, the AIM-9D IRAH and the AIM-9C SARAH. The two heads are interchangeable and used with the same motor-warhead-fuse combination. The IRAH is a passive system homing on the infrared energy generated by the target and as such is limited to attack in the rear hemisphere. SARAH has been designed to provide a capability in the forward hemisphere or head-on aspect. This version is quite similar to the SPARROW system in that the target must be illuminated by a CW (continuous wave) radar to provide a reflected signal to the missile. The missile senses a Doppler frequency from the reflected energy and homes on the source of this frequency. As the missile approaches the target the Doppler shift reaches a maximum and firing is actuated.

## CHARACTERISTICS

	IRAH	SARAH
Weight lb.	195	210
Length in.	113	119
Diameter in.	5	5
Wing Span in.	24.8	24.8
Range (max) n. m.	10	5
Range (min) ft.	1500	1500
Altitude (max) ft.	80.000	70.000
Altitude (min) ft.	S. L.	5000
Delivery Aircraft	F-4, F-8	F-8

II-V-3-20

SECRET

SECRET

8 March 1965

SIDEWINDER - Air-to-Air Missile-AIM-9

AIM-9C SARA (Semi-Active Radar Head) AIM-9D IRAH (Infrared Alternate Head)

Program Element: IRAH 99 22 0302      SOR No: IRAH WW-021A  
SARA 99 22 0402      SARA WW-021B

Description: See Opposite Page

User Unit: Fighter Squadrons VMF, VMF (AW) and VMFA

Replaces: None

Advantages: Provides a highly reliable system for attack in the rear hemisphere. IRAH version is a completely passive system.

Status and Schedule: Operational

RDT and E Funding: (\$1000's by FY) Source FYFS/PO-67

<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>
0/0	0/0	0/0	0/0	0/0

Procurement: (by FY) Source FYFS

	<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>
IRA	0	1280	1280	1071	
SARA	0	300	0	0	

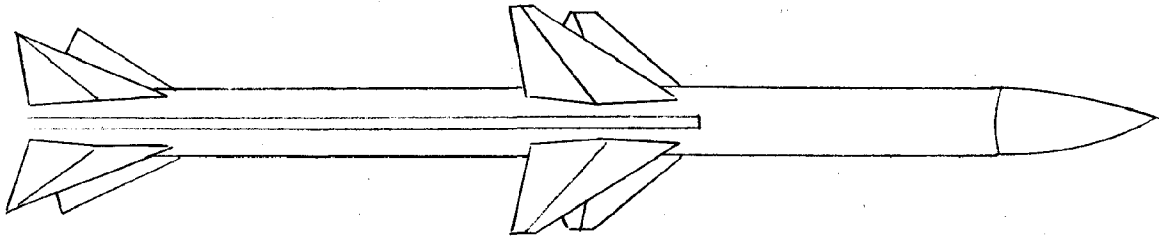
Cognizant Branch: AAW

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## SPARROW III AIM-7D -7E



The SPARROW III Weapon System is designed to provide effective armament for Navy and Marine Corps all-weather fighters.

SPARROW III is a medium range semi-active air-to-air guided missile designed primarily for attack in the head-on intercept. The missile is guided to the target by homing on reflected CW energy.

	AIM-7D	AIM-7E
Weight, lbs.	402	450
Length, ft.	12	12
Body Diameter, in.	8	8
Speed (max.)	M=3.5	M=4.2
Altitude (max.)	70,000	90,000
Launch Range (fighter targets) mi.	8 1/2	13
Kill Probability	0.5	0.5
Launch Aircraft	F-4	F-4
Missiles Carried	4	4

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SECRET

SECRET

8 March 1965

## SPARROW III Air-to-Air Missile - AIM-7E

Program Element: 3-- -- -- 2SOR No: WW-020ADescription: See Opposite PageUser Unit: Fighter-Attack Squadrons VMFAReplaces: AIM-7D (SPARROW III 6a)Advantages: Provides intercept capability in head-on aspect at increased range.Status and Schedule: OperationalRDT and E Funding: (\$1000's by FY) Source FYFS/PO-67

<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>
4300/	2900/	0/17,500*	0/3200*	0/2200*

\* These funds are for the Advanced SPARROW

Procurement: (by FY) Source FYFS

<u>64</u>	<u>65</u>	<u>66</u>	<u>67</u>
1000	0	0	0

Cognizant Branch: AAW

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SECRET

WITHDRAWN MATERIALS  
"OUT CARD"DESCRIPTION of WITHDRAWN MATERIALS:

Collection Title: Vietnam Misc  
PC Number: Marine Corps Aviation Program FY1965-1975  
Location: Folder, Drawer II 2  
Box Number: \_\_\_\_\_  
Folder Title: \_\_\_\_\_  
Photo Number: \_\_\_\_\_  
Description of Item: Referral 21 page II-V-3-24

THESE MATERIALS HAVE BEEN SIGNED OUT TO:

Name/Rank: \_\_\_\_\_  
Unit: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Phone Number: \_\_\_\_\_  
Date: \_\_\_\_\_  
Purpose: \_\_\_\_\_



SECRET

8 March 1965

SHRIKE - Anti-Radiation Missile - AGM-45AProgram Element: 3 -- -- -- 2SOR No.: W11-04Description: See Opposite PageUser Unit: Attack Squadrons - VMA, VMA (AW)Replaces: New WeaponAdvantages: Provides stand-off delivery for attack of enemy radars.Status and Schedule: In Op Eval (C-Band) VMA-332 and VMA-311 have capability. Navy squadrons acquiring capability. S Band and X Band sensitive missiles in development.RDT&E Funding: (\$1000's by FY) Source FYFS/PO-67

<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
7300/	6800/	2100/2100	2100/0	2100/0	2100/0

Procurement: (by FY) Source FYFS

<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
324	245	1045	1045	1046	1046

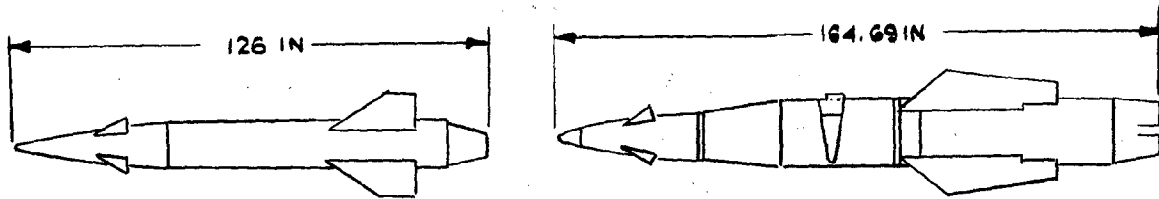
Cognizant Branch: AAW

II-V-3-25

SECRET

SECRET

15 March 1965

BULLPUP

Bullpup A (AGM-12B)

Bullpup B (AGM-12D)

The Bullpup air-to-surface guided-missile weapon system is designed for tactical use against all surface targets whose relative size, importance, or disposition requires the accurate delivery of a 250-pound warhead (AGM-12B) or a 1,000-pound warhead (AGM-12D). Some stand-off capability is inherent in the system, the limit of which is usually a function of visual target acquisition. The missile has cruciform fixed wings and all-movable forward-control surfaces, which are aligned with the wings. The weapon is launched on the approximate line-of-sight from the pilot to the target; it is then visually tracked by the pilot and command-controlled by means of a radio link until impact. The missile control surfaces are operated in a "bang-bang" fashion by four pneumatic actuators.

## CHARACTERISTICS

## BULLPUP A (AGM-12B)

Primary kill mechanisms	fragment and blast
Weapon type	antimateriel
Payload fuzing	contact or delay
Delivery	single
Flight speed, mach	1.8
Weight, lb	
Total, loaded	562.6
Total, burned	466.3
Payload (warhead)	250
Explosive (H-6)	103
Guidance and control	40.6

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SECRET

SECRET

15 March 1965

## BULLPUP B (AGM-12D)

Primary kill mechanisms	fragment and blast
Weapon type	antimateriel
Payload fuzing	contact or delay
Delivery	single
Flight speed, mach	2
Weight, lb	
Total, loaded	1,778
Total, burned	1,421
Payload (warhead)	974.0
Explosive (H-6 and picratol)	376.0
Guidance and control	62.9

II-V-3-27

SECRET

SECRET

8 March 1965

BULLPUP B - Short Range Guided Missile - AGM-12CProgram Element: 3 -- -- -- 2SOR No.: W11-01Description: See Opposite PageUser Unit: Attack Squadrons - VMA and VMA (AW)Replaces: BULLPUP A (AGM-12B)Advantages: Provides longer range, greater lethality and effectiveness. Compatible with automatic all weather guidance system of A-6A.Status and Schedule: In the FleetRDT&E Funding: (\$1000's by FY) Source FYFS/PO-67

<u>65</u>	<u>66</u>	<u>67</u>
0	0	0

Procurement: (by FY) Source FYFS

<u>64</u>	<u>65</u>	<u>66</u>	<u>67</u>
3500	0	0	0

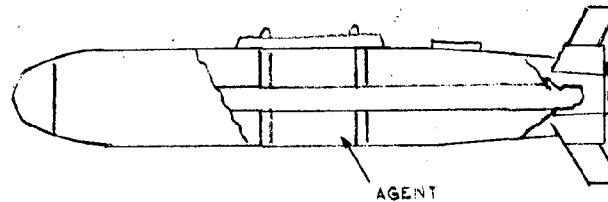
Cognizant Branch: AAW

II-V-3-28

SECRET

SECRET

## WETEYE - Chemical Bomb MK 116 Mod 0



WETEYE is a 500 lb. chemical bomb expected to fulfill the requirements for a high agent-to-total weight ratio, chemical warfare (CW) weapon system delivered by existing and future carrier-based attack aircraft using normal free-fall delivery techniques. WETEYE can be delivered from the multiple-bomb rack (MBR) or delivered from the ejector racks.

## CHARACTERISTICS

Gross Weight, lbs. . . . .	562.5
Agent Payload, lbs. . . . .	347.5
Diameter, in. . . . .	14
Length, in. . . . .	92.65
Delivery Aircraft . . . . .	A-4, A-6, A-7, F-4

II-V-3-29

SECRET

SECRET

8 March 1965

WETEYE - Chemical BombProgram Element: 3-- -- -- 2SOR No.: W11-08Description: See Opposite PageUser Unit: Attack Squadrons - VMA, VMA (AW) and VMFAReplaces: M-94Advantages: Larger area of coverageStatus and Schedule: Op Eval 4th qt. FY-1965 to prod. 1st qt.  
FY-1966 2500 weapons are scheduled for production in FY-1966.RDT&E Funding: (\$1000's by FY)

<u>64</u>	<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
1005	508	0				

Procurement: (by FY)

<u>64</u>	<u>65</u>	<u>66</u>	<u>67</u>
0	800	1600	1600

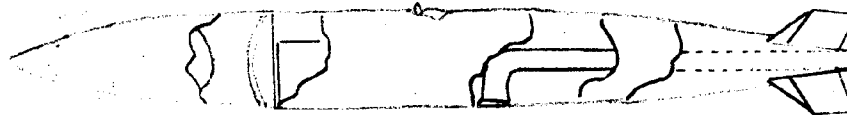
Cognizant Branch: AAW

II-V-3-30

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SECRET

## AERO 14 - TANK, SPRAY, AIRCRAFT, LIQUID



The AERO 14B tank is a pressure-controlled, combination storage and airborne dispersion medium for various liquid agents. The major components are nose section, center section, tail section, pressure control section, and tail pipe assembly. This tank is currently deployed with FMF forces.

## CHARACTERISTICS

Gross Weight, lbs. . . . .	1350-1578 (Depending on agent)
Empty Weight, lbs. . . . .	650
Length, in. . . . .	190
Max. Diameter, in. . . . .	22
Agent Capacity, gal . . . . .	80 approx
Delivery Aircraft. . . . .	A-4, A-1, A-7

II-V-3-31

SECRET

SECRET

8 March 1965

AERO 14 Tank, Spray, Aircraft, LiquidProgram Element: 3 -- -- -- 2SOR No.: W11-08Description and Performance: See opposite pageUser Unit: Attack Squadrons - VMAReplaces: NoneStatus and Schedule: OperationalRDT&E Funding: (\$1000's FY)  
NoneProcurement: (by FY)

None

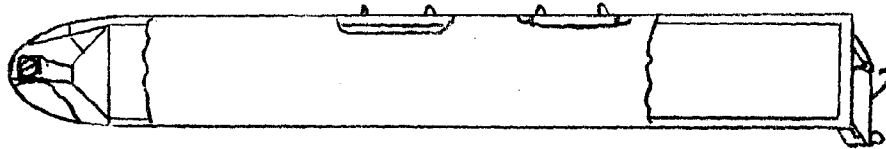
II-V-3-32

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## MARK 12 MOD 0 AIRCRAFT CHEMICAL TANK



The MK-12 Aircraft Chemical Tank is a ram air operated airborne dispersion medium for smoke producing sulphur trioxide ( $\text{SO}_3$ ) in chlorosulphuric acid solution. The payload consists of 500 hollow aluminum spheres 2.7 inches in diameter immersed in approximately 40 gallons of liquid smoke agent which occupies the space inside and around the spheres. The tank is compatible with both the 14 and 30 inch racks.

## CHARACTERISTICS

Gross Weight, lbs. . . . .	1000 approx
Empty Weight, lbs. . . . .	300
Diameter, in. . . . .	14
Length, in. . . . .	108.94
Delivery Aircraft . . . . .	A-4, A-6, A-7

II-V-3-33

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SECRET

8 March 1965

MARK 12 Mod O - Aircraft Chemical TankProgram Element: 3 -- -- 2SOR No.:Description: See Opposite PageUser Unit: Attack Squadrons VMA, VMA (AW)Replaces: NoneAdvantages: Provides an effective smoke screen that stays at ground level.Status and Schedule: OperationalRDTE&E Funding: (\$1000's by FY)

<u>64</u>	<u>65</u>	<u>66</u>	<u>67</u>
0	0		

Procurement: (by FY)

<u>64</u>	<u>65</u>	<u>66</u>	<u>67</u>
0	0		

Cognizant Branch: AAW

II-V-3-34

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SECRET

8 March 1965

Ex-4 - Chemical Field Filling Unit

The Ex 4 FFU is a filling unit contained in a modified SATS van. The unit is automatic after spray tank is connected and filling is accomplished remotely by one man at a rate of approximately one tank every fifteen minutes.

II-V-3-35

SECRET

SECRET

8 March 1965

Ex-4 Chemical Field Filling UnitProgram Element: 6 22 44 01 2SOR No.: W11-08Description and Performance: See Opposite PageUser Unit: Marine Air Base Squadron - MABSReplaces: MK-3 Mod 0 Field Filling UnitAdvantages: Completely enclosed unit requiring only three men to fill tanks at the rate of 4 per hour.Status and Schedule: Category II Prote 75% complete Dugway 1st 66 doc prepared.RDT&E Funding: (\$1000's by FY)

<u>64</u>	<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>
150	225	150				

Procurement: (by FY)

<u>65</u>	<u>66</u>
0	6*

\* CMC proposed procurement of six units only to utilize existing assets (AERO-14B Spray Tank) until pre-packaged B/C munitions available.

Cognizant Branch: AAW

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## CHEMICAL AND BIOLOGICAL AGENTS

## CHEMICAL AGENTS

## TOXIC AGENTS

1. VX - Persistent Nerve Agent.

VX is a slow-acting nerve agent which is casualty-producing either in aerosol or liquid form. The physiological effects produced are convulsions, paralysis, and respiratory failure. Its outstanding characteristic is a very high eye and skin toxicity. It is persistent, and can contaminate areas for several days. Its rate of action: by inhalation, 4 to 10 minutes (mean 15 min.); by skin absorption, 30 minutes to 24 hours.

2. GB - Nerve Agent (Sarin).

GB is an odorless, colorless liquid when pure. It is a quick-acting and casualty-producing nerve agent with very high eye toxicity. It produces casualties primarily by inhalation effects, although skin absorption is a significant factor in some cases. It is non-persistent as a vapor; as a liquid its persistence varies with the temperature. The rate of action is very rapid usually causing death within 2 to 30 minutes after a lethal dosage is inhaled. Lethal quantities can also be absorbed through the eyes and skin. It is available in large quantities and its physiological effects are convulsions, paralysis, and respiratory failure.

3. HD - Distilled Mustard.

Mustard gas is an oily, irritating, blistering gas which is better for its incapacitating effects than for its lethal effects. It is most effective in hot humid weather of about 80°F by skin absorption of vapor among masked personnel in situations where considerable delay in the onset of its incapacitation is acceptable. HD produces predominantly temporary incapacitation and a low percentage of deaths. The physiological effects produced are inflammation of the eyes, redness of skin and blistering, inflammatory reaction of nose, throat, and lungs. HD is persistent and may remain one or two days under average conditions, and a week or more under very cold conditions.

4. CG - Phosgene.

Phosgene is a choking gas of low persistency. It exerts its effects solely on the lungs, and results in damage

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to capillaries. It causes seepage of watery fluid into the air cells; if the dose has been lethal, they become so flooded that air is excluded and the victim is "choked" by oxygen deficiency. Most deaths occur within 24 hours.

5. AC - Hydrogen Cyanide.

Hydrogen cyanide is a blood gas, and is absorbed into the blood primarily by breathing. It interferes with utilization of oxygen by the body tissues, and causes a marked stimulation of the breathing rate. Death occurs within 15 minutes of receiving a lethal dosage. AC gas is ignited about 50 percent of the time when it is disseminated from an ordinary artillery shell, but it is suitable for use in the 4.2 inch mortar shell, bombs, rockets, and grenades.

## INCAPACITATING AGENTS

1. DM - Diphenylaminechloroarsine (ADAMSITE).

DM does not vaporize at ordinary temperatures and must be dispersed as an aerosol through application of heat. It has no odor. Its skin and eye effects are irritating, but relatively non-toxic. The rate of action is fairly rapid, requiring only about two minutes for incapacitation. Physiological effects include irritation of the eyes and mucous membranes, viscous discharge from the nose, sneezing, coughing, headache, pain in the chest, nausea, and vomiting. DM is used mostly in smoke candles and hand grenades. It is used mostly for riot control purposes.

2. CN - Chloroacetophene.

CN is a tear gas which causes tears and irritation of the skin. CN must be vaporized or dispersed by some means other than by its volatility. It is stable in storage. Its odor is similar to that of apple blossoms. The physiological actions are powerful lachrymatory effects and irritation to the upper respiratory passages. It is used in smoke pots, grenades, and vehicle-and helicopter-mounted or hand held dispensers. CN is used primarily for riot control purposes.

3. CS - Ortho-chlorobenzylidenemalonitrile.

CS is a relatively nontoxic harassing agent that is stable and effective over a wide temperature range. It is very effective at very low concentrations and produces incapacitation by eye effects, burning in the nose, throat, and lungs, and by marked respiratory distress. It acts more rapidly than CN and DM, almost instantaneous producing incapacitation within approximately 30 seconds. CS has all the effects of CN, works more rapidly and produces more aggravating effects on its targets with no danger of permanent injury. It is suitable for use

## CONFIDENTIAL

in grenades, smoke pots, and mounted, hand-held, or helicopter-mounted dispensers. The persistency is low because it is dispensed in aerosol form.

4. DMI, CNI, CSI.

DMI, CNI, and CSI are special mixtures of riot control agents described previously, but in the form of non-burning, micropulverized powders. The agents are generally disseminated as fine particles by the bursting action of grenades or from dry spray devices. Their effects are the same as those of the burning type agents.

## 5. BZ

BZ is a non-lethal incapacitating agent which can be employed in areas occupied by mixed groups of military, paramilitary, and civilian populations without massive death and destruction. It is dispersed through thermal generation. Its effects are: rapid pulse, dry mouth, blurred vision, poor coordination, restless activity, stupor, confusion, incoherence, hallucinations, disorientation, delirium, irritability, an attitude of suspicion and uncooperation, an inability to solve problems or remember information. No antidote exists, but the effects will diminish in a number of hours or days depending on the dosage.

## SMOKES

1. WP - White Phosphorus.

WP is a spontaneously inflammable solid which burns on contact with air to form solid smoke particles or phosphorus pentoxide. The showers of burning phosphorus particles are highly incendiary for prolonged periods of time.

2. PWP - Plasticized White Phosphorus.

A matrix formed by coating WP with a film of synthetic rubber then folding and stretching until the mass is homogeneous. It is dispersed by the exploding munition but does not break into such small particles as WP. The properties and effects are the same as those of WP.

3. HC - Hexachloroethane.

HC smoke mixture is a solid that reacts to form a dense, persistent, grayish white smoke cloud which is slightly less dense than WP. It is used for screening and spotting purposes.

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4. FM - Titanium Tetrachloride.

FM is a liquid compound which can be atomized by detonation or by spraying into the air. When atomized, it reacts vigorously with the moisture in the air to form a dense, white, persistent smoke cloud.

5. FS - Sulfur Trioxide / Chlorosulfonic Acid.

FS is a mixture of 55 percent sulfur trioxide and 45 percent chlorosulfonic acid. The odor is acrid and in liquid form FS is highly corrosive to the skin. It is mostly used in generators, spray tanks and special munitions.

6. SGF - Smoke Generator Fog.

SGF is oil (called fog oil) used in mechanical smoke generators to produce large area smoke screens. The fog oil is vaporized by the heated combustion gases produced in the engine of the smoke generator.

## TIME OF ONSET &amp; DURATION OF INCAPACITATION

Agent & Route of Entry into Body	Time of Onset of Incapacitation*		Duration of Incapacitation	Ave. Percent Casualties Becoming Fatalities **
	Range	Mean		
GB Inhalation	2-5 min	3 min	1-5 da	25
HD Eye Effects	3-12 hr	6 hr	1-4 wk	3
HD Skin Absorption	3-24 hr	12 hr	2-6 da	3
VX Inhalation	4-10 min	7 min	1-5 da	25
VX Skin Absorption	1-24 hr	12 hr	1-5 da	25
BZ Inhalation	1-2 hr	1 hr	3-7 da	Unknown

\* Depends upon dosage received

\*\* Depends upon medical treatment

## BIOLOGICAL AGENTS

## BACTERIA

1. Bacillus Anthracis

Bacillus Anthracis is a rod-shaped micro-organism that produces the disease known as anthrax. It may be contracted by handling wool, hides, and flesh of infected animals. The

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incubation period is one to seven days, usually less than four days. The mortality (in man) of untreated cutaneous cases range up to 25 percent; in pulmonary cases it is near 100 percent; and the rare intestinal cases usually are fatal. It is not epidemic in man.

2. Shigella dysenteriae

Shigella dysenteriae produces the disease known as bacillary dysentery, an infectious disease usually accompanied by fever, pain, diarrhea, weakness or prostration, and ulceration of the mucous membranes of the intestine. The source of infection is feces of infected patients and carriers. The incubation period is one to seven days, and usually less than four days. The disease is highly epidemic in unsanitary conditions and is highly contagious. The mortality ranges from 2 to 20 percent in untreated cases.

3. Brucella group

In the Brucella group are three closely related organisms: Brucella melitensis, Brucella abortus, and Brucella suis. The disease produced is brucellosis or undulant fever in man, a general infection characterized by irregular, prolonged fever, profuse swelling, chills, pain in muscles and joints, and fatigue. It is transmitted by the ingestion of infected dairy products or by contact with infected animals or animal products. The incubation period is 7 to 60 days. The mortality of untreated cases is said to average three to six percent.

4. Vibrio comma

Vibrio comma is a micro-organism that causes the disease known as cholera. Cholera is an acute infectious gastro-intestinal disease of man, characterized by sudden onset, with nausea, vomiting, diarrhea, toxemia, and frequently collapse. Sources of infection are feces and vomitus of patients and temporary carriers. It is transmitted through fecal contamination of water or food by soiled hands, utensils, or flies. The incubation period is one to five days, usually three days. The mortality ranges from about 3 to 30 percent in treated cases and to 50 percent in untreated cases.

5. Bacterium tularensis

A micro-organism that produces Tularemia, also known as rabbit fever and deer fly fever. It is a fatal blood infectious disease of wild rodents characterized by sudden onset with chills, fever, and prostration. Its sources of infection are rabbits, squirrels, deer flies, ticks, woodchucks, coyotes, cats, skunks, deer, foxes, hogs, sage hens, and some snakes. It is transmitted by infection through skin, eyes, or lungs; from handling animals, by bites from flies and ticks; by eating insufficiently cooked rabbit meat, or by

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drinking contaminated water. Its incubation period is two to five days. The mortality of untreated cases is from four to eight percent, averaging five percent.

6. Pasteurella pestis

An aerobic bacterium that produces the disease commonly known as plague or black death. It occurs in three forms in man: bubonic, pneumonic, and septicemic infections. An infectious disease of rodents, it is transmitted to man by rodents and fleas (bubonic), or from man to man by contaminated droplets --- sneezing and coughing (pneumonic). It is characterized by high fever, extreme weakness, glandular swelling, pneumonia, and hemorrhages in the skin and mucous membranes. The incubation period is one to seven days for pneumonic plague and four to seven days for bubonic plague. The mortality in untreated bubonic plague is from 30 to 60 percent, while pneumonic plague kills from 90 to 100 percent. The epidemicity in pneumonic plague is high unless quarantine and other measures are taken.

7. Salmonella typhosa

This bacterium produces the disease known as typhoid fever, a systemic infection characterized by continued fever, lymphoid tissue involvement, ulceration of the intestines, enlargement of the spleen, rose-colored spots on the skin, and diarrhea. Sources of infection are feces and urine of infected individuals and carriers. In direct spread is mainly by contaminated water, food, milk, shellfish, and flies. The incubation period is from 3 to 38 days, usually 7 to 14 days. The epidemicity is high in the presence of carriers and the lack of sanitary controls. The mortality in untreated cases ranges from 0 to 10 percent.

## VIRUSES

1. Psittacosis virus or rickettsia

This organism produces the disease commonly called parrot fever. It is characterized by fever, cough, headache, constipation, weakness, and is sometimes accompanied by delirium. It is transmitted by contact with infected birds, their surroundings, or by inhalation of infected dust or droplets. Incubation period is usually 6 to 15 days in humans, but may be as much as 30 days. The mortality varies from 0 to 20 percent.

2. Encephalitis and encephalomyelitis viruses

These viral organisms produce five variations of encephalitis and encephalomyelitis. Those of prime interest are: Japanese B-type encephalitis in Japan, Korea, China, and some Pacific Islands; and Russian Far East encephalitis in European and Siberian Russia. Each type of disease is produced by a specific virus, but the clinical pictures are similar,

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varying mainly in severity and rate of progress. Characteristics are inflammation of the meninges of the brain, headache, fever, dizziness, drowsiness or stupor, tremors or convulsions, severe prostration, occasional paralysis, and muscular uncoordination. The sources of infection are birds and horses; for mosquito infection, it is transmitted by mosquitos or ticks. The incubation period is 2 to 15 days. Its mortality is unknown probably 5 to 60 percent with all types.

3. Influenza virus

The disease produced by this virus is called influenza (type A & B) or "la grippe" which is epidemic, occasionally pandemic. It is characterized by sudden onset, catarrhal inflammation of the respiratory tract, fever for one to seven days, marked prostration, aches and pains in the back and limbs, sore throat, bronchitis, and often pneumonia as a complication. The sources of infection are discharges from the mouth and nose of infected persons, and soiled articles. The incubation period of type A is one to two days; of type B, 12 to 18 hours. Mortality is 0 to 1 percent, but it is often followed by complicating respiratory infections with high mortality. Local epidemics are widely prevalent under favorable conditions and pandemics occur irregularly.

4. Variola virus

This virus produces smallpox, or variola, a highly contagious disease, often fatal, characterized by severe fever and small blisters of the skin. The incubation period is 7 to 21 days, usually 12 days; the mortality ranges from one percent with the mild type to 30 percent with the severe type. Its epidemic rate is high, depending on the immunity status of the population.

5. Yellow fever virus

This virus produces yellow fever characterized by sudden onset, chills, fever, prostration, headache, backache, muscular pain, congestion of mucous membranes, severe gastrointestinal symptoms, and jaundice from liver damage; vomiting of blood often occurs. The source of infection is the blood of humans and monkeys infected with yellow fever. The mortality rate is variable.

## RICKETTSIAE

1. Rickettsiae prowazeki

This rickettsiae produces classical typhus, epidemic in humans. An acute infectious disease, characterized by severe headache, fever, pains, and skin rash. The source of infection is persons infected with the disease. It is transmitted by body lice. The incubation period is from six to 15

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days, averaging 12 days. The mortality is from 10 to 80 percent, varying with the epidemic and the ages of the individuals. Epidemics occur under crowded or unsanitary conditions, particularly during cold weather.

2. Rickettsia rickettsii

This micro-organism produces the disease commonly called Rocky Mountain spotted fever, an acute infectious disease characterized by joint and muscular pains, fever, and skin rash. The sources of infection are ticks of various types. It is transmitted by ticks or from contact with infected tick blood or feces on the unbroken skin, and is not communicable from man to man. The incubation period is from three to ten days. Mortality may vary from 20 to 60 percent depending on the locality.

3. Coxiella burnetii (Rickettsia burnetii)

This bacterium - like organism produces a disease known as Q fever (also known as nine mile fever and Queensland fever), which is characterized by acute fever of sudden onset, headache, chills, weakness, and severe perspiration. Pneumonia occurs in the majority of cases. Sources of infection may be cows, goats, sheep, and ticks; the organism has been found in milk. Incubation period is 10 to 15 days and mortality is from 0 to 4 percent.

## FUNGI

1. Coccidioides immitis

This fungus produces the disease known in its primary form as valley or San Joaquin fever which is a highly infectious, acute, disabling, and self-limiting respiratory infection resembling influenza. The secondary progressive form (coccidioidal granuloma) is a chronic, malignant, disseminated infection which involves any and all organs of the body, including skin and bones, and produces numerous abscesses. Sources of infection are dust, soil, and vegetation contaminated with spores of this fungus. Transmission is made by inhalation of spores in dust, soil, and dry vegetation and possibly through skin scratches or wounds. The incubation period for the primary pulmonary form is 10 to 21 days (averaging 12). The progressive form is not necessarily preceded by symptoms of primary infection. Fatalities are about 50 percent in the secondary progressive form.

2. Nocardia asteroides

This fungus produces a disease known as nocardiosis, a severe pulmonary infection, similar in many respects to tuberculosis and is characterized by chronic pneumonia. Pulmonary infection is characterized by general malaise, fever,

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productive cough, night sweats, and loss of appetite and weight. Sources of infection are soil, dust, and vegetation contaminated with organisms. It is transmitted by contaminated dust and possibly by droplet infection. The incubation period in man is unknown; infection in guinea pigs is usually fatal in a week. The death rate is very high in untreated or advanced cases of generalized infection, perhaps close to 100 percent.

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11 June 1965

REDEYEDescription:

REDEYE is a shoulder-launched antiaircraft missile system designed to provide for the local protection of MEF elements against the low altitude operations of enemy attack and reconnaissance aircraft, helicopter borne troops, and airborne forces.

The major items of equipment of the REDEYE system are shown in the chart appended hereto. These items will be allocated as follows:

<u>Item</u>	<u>Allocation</u>
REDEYE missiles (w/launcher)	320 per MEF (80 two-man teams @ 4 missiles per team)
Shipping and Storage Containers	1 per 3 missiles
Training Devices	
Electronic	2 per 5 two-man teams
Eject-Only	2 per two-man team
Guided Missile Test Set	4 per FSR
	2 per NAD

Major Characteristics:

Wt (Msl & Launcher):	28lbs	Msl Vel: MACH 1.7
Length ( " ):	49.7 in.	Max Alt: 9000 ft.
Diam ( " ):	3.61 in.	Max Range: 4000 yds.
Msl Warmup Time :	4.5 sec.	Tgt. Vel: 0-400 knots
Type Guidance:	IR Homing	Warhead Wt: 0.9 lbs
Type Warhead:	Blast	Type Fuze: Contact/ Penetration

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Organization:

The planned organization of REDEYE for combat (per MEF) is as follows:

<u>Unit(s)</u>	<u>Assigned to</u>	<u>Total teams</u>
5 teams	Each Inf Bn	45
1 platoon	Div Hqtrs	15
1 platoon	MWHG	15
*5 teams	LAAM Bn	<u>5</u>
		80 Teams/MEF

\* These teams will be manned on a secondary rather than primary duty basis.

The REDEYE platoons at Div Hqtrs and MWHG will be identical and organized as follows:

	<u>Off</u>	<u>Enl</u>
Platoon Hqtrs		
Plat Cmdr (Lt)	1	
Plat Sgt (GySgt)		1
Radio Operators		4
REDEYE Sections (3)		
Section Leader		3
Radio Operators		6
Gunners		<u>30</u>
TOTAL	1	44

Employment:

The teams in the LAAM battalion will be employed for close-in defense of LAAM position areas against low speed intruders (including helicopters) and to fill in any gaps in the HAWK system low altitude radar coverage as result from local terrain masking.

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Employment of the teams available in the REDEYE platoon at MWHG will depend on such factors as the phasing of MAW elements ashore, the deployment pattern and low altitude coverage afforded by the LAAM (HAWK) batteries, the size and primary threat direction of the enemy air threat, the proximity of MAW elements to other MEF units, and the priority of requirements for local AA protection of MAW position areas.

Standing operating procedures for the control and coordination of deployed REDEYE teams are expected to be developed from the results of the Marine Corps REDEYE Troop Test to be conducted January - July 1966.

The planned phase-in schedule for REDEYE is as follows:

<u>MEF</u>	<u>Period</u>
II	Second Half FY-66
III	First Half FY-67
I	Second Half FY-67

Procurement:

The planned procurement of REDEYE missiles is as follows:

<u>Fiscal Year</u>	<u>#Missiles</u>
1963	162
1964	None
1965	550
1966	1505
1967	2750
1968	1600
1969	1600

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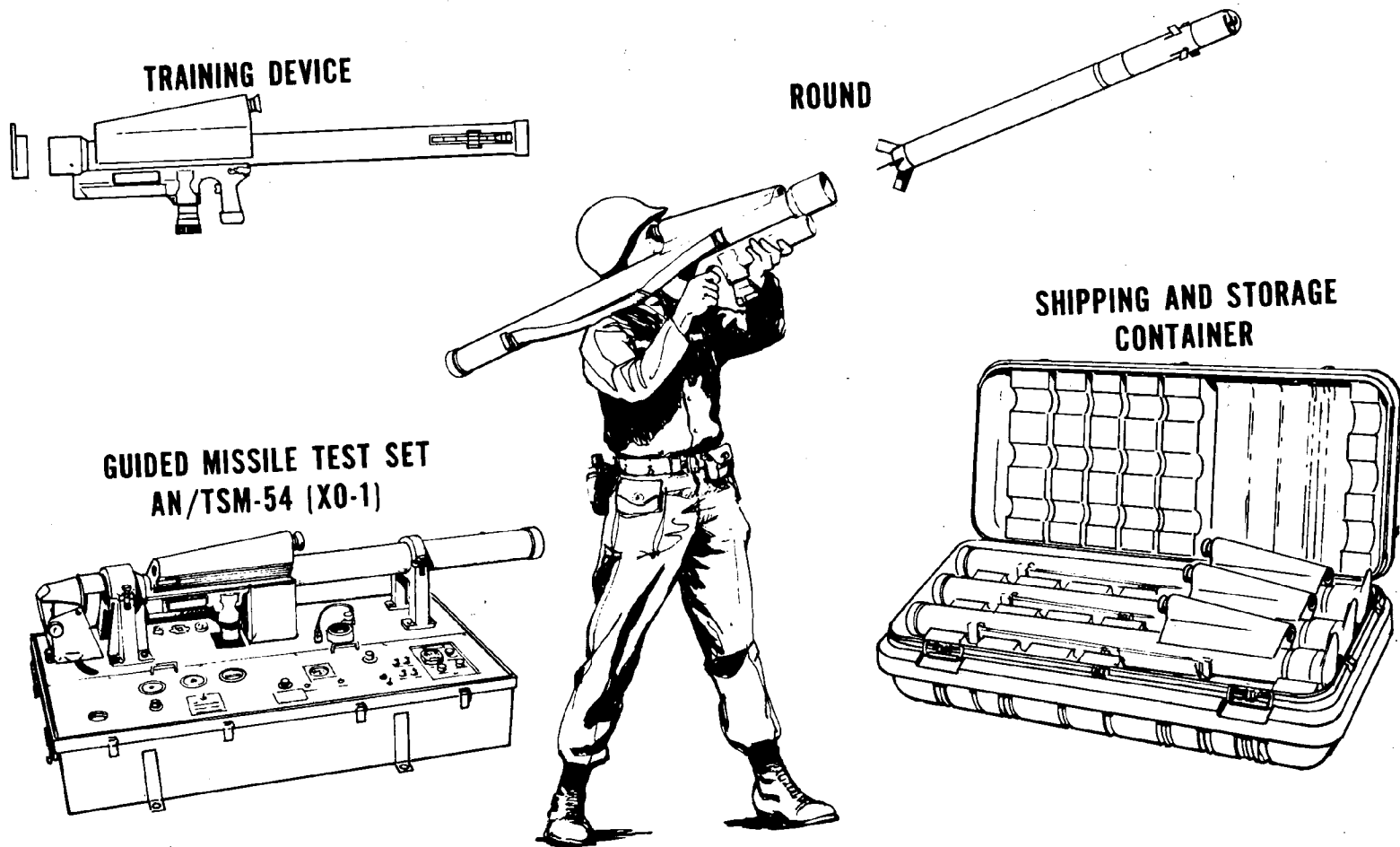
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The estimated REDEYE combat assault expenditure rate is 0.081 missile per gunner per day; the estimated combat sustained rate is 0.041 missile per gunner per day.

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(U) Redeye Weapon System — Major Items.

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## MARINE AIR CONTROL SYSTEM

There are four different units within the system which have air control functions.

Tactical Air Control Center (TACC) is operated by the Marine Wing Headquarters Group. It is the Command Post of the Tactical Air Commander. Here the operations of the other control elements are coordinated.

Marine Air Control Squadron (MACS) control friendly enroute air traffic and direct fighter aircraft and missile batteries (presently HAWK) in anti-air warfare operations. The operational center is the Tactical Air Operations Center (TAOC).

Marine Air Support Squadron (MASS) coordinates requests for close-air support. Its operational center is the Direct Air Support Center (DASC).

Marine Air Traffic Control Unit (MATCU). This unit provides traffic control at Marine airfields in all weather conditions.

## TACTICAL AIR CONTROL CENTER (TACC)

The TACC is the Command Post of the Tactical Air Commander (TAC), usually the Wing Commander. It is primarily a reporting and communication facility. No radars are used here. The TACC coordinates the functions of several MACS (normally three) within the Wing. Information received from the MACS is displayed on the large screen in the TACC to give the TAC a picture of the overall air situation. With manual control, the TAC gets information on only a few plots, and gets them up to an hour after the event has occurred. This delay should be greatly reduced by use of the MTDS. Other command functions of planning and supporting the day-to-day operations are also included.

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## MARINE AIR CONTROL SQUADRON (MACS)

There are three MACS within each Wing. The T/O is approximately 200 officers and men. Four principal types of radars are operated:

Control Radar Present radar is the MPS-11A, an adaptation of an Air Force developed set. Range is only about 85 miles on a small jet, and altitude capability is about 40,000 feet maximum. This radar will be replaced in FY-65 with the TPS-34, which will have a 250 mile range and 100,000 feet altitude capability. It is a "3-D" (range, azimuth and height) radar. The radar is scheduled to be operational in the 3d Quarter of FY-65. Its planned replacement is the Tri-Service Lightweight Tactical 3D Radar.

Height Finder Present radar is the AN/TPS-37, an Air Force developed set. Range is about 125 miles on a small jet. This is scheduled to be replaced in FY-69 with the TPS-32, which will have a 250 mile range.

Early Warning Radar The radar planned for use is the AN/TPS-22A which was developed by the Air Force, and has a 250 mile detection capability. It is scheduled for delivery to FMF units in the 3d Quarter of FY-65. This an interim set because of its weight (30,000 lbs) and pressure radome. It has been procured in very limited numbers. Since the AN/TPS-32 will be developed as a 3D Radar it will replace the AN/TPS-22 in addition to the AN/TPS-37.

Gap Filler Radar Present set is the AN/UPS-1, a lightweight radar with 100 mile range and altitude capability beyond 50,000 feet. When MTDS is introduced, the number of these radars will be reduced from 3 to 2 per squadron. Its replacement will be the Lightweight Amphibious Assault Air Surveillance Radar.

Control Capabilities Present capabilities for control of aircraft are limited by the manual mode of operation. Normally, there are up to seven weapons controller positions and five scanner-classifier positions in the TAOC. Above average controllers can direct two intercepts, for a maximum total of fourteen intercepts, with 8 to 10 being more probable. The maximum number of tracks capable of being plotted by the scanner-classifiers is 20. While the new radars will extend the range greatly, the net effect, with manual control, will be further lessened control capability (in relative terms) because of the increased numbers of aircraft in the greatly enlarged airspace under surveillance. To correct this problem the Marine Tactical Data System (MTDS) is being developed.

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The first operational MTDS-equipped TAOC is scheduled for delivery in CY-1966.

## MARINE AIR SUPPORT SQUADRON (MASS)

There is one MASS in each Wing. Its operational center, the DASC, coordinates all requests for air support of the ground element of the air/ground team. The DASC is usually co-located with the Fire Support Coordination Center (FSCC) of the ground unit being supported. Requests for visual close air support come from the Forward Air Controllers (FAC) in the Tactical Air Control Parties (TACP), who are aviators attached to ground units. Close air support is also provided by the Air Support Radar Teams (ASRT) of the MASS. Normally three ASRTs are assigned to each MASS, each using a Radar Course Directing Central AN/TPQ-10. The set has a range of 50 miles. Within 20 miles of the radar, its accuracy is better than 50 yards C.E.P., directing a sub-sonic aircraft on a level attack on a target. The set is helicopter transportable in two packages; the antenna and the equipment shelter. Total weight is about 7,100 pounds.

An extensive study of the functions and requirements of the MASS is scheduled for completion in FY-65.

## MARINE AIR TRAFFIC CONTROL UNIT (MATCU)

At present, there are ten MATCUs. These units are normally attached to Marine Air Base Squadrons (MABS) and handle the air traffic around a Marine Short Airfield for Tactical Support (SATS) or other expeditionary fields. At present, MATCUs are controlling traffic at several fixed bases; New River, Yuma, Kaneohe, Futema, and Iwakuni. When not so used, the personnel augment the operators at regular control towers and Radar Air Traffic Control Centers (RATCC). The MATCU has complete all-weather control facilities for tactical aircraft, Surveillance Radar, GCA, TACAN, Low-Frequency Homing Beacons, Control Towers, etc. The Bureau of Weapons has supported the Marine Corps in a concentrated, and productive, R&D program intended to produce truly expeditionary MATCU gear. By the End of FY-65, all conventional aids should be replaced with helicopter transportable equipments. The complete MATCU electronics will then weigh about 45,000 pounds. The present GCA (the SPN-4) alone weighs 65,000 pounds.

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## MARINE TACTICAL DATA SYSTEM (MTDS)

The limited capability available with manual air traffic control has been mentioned in MACS and TACC sections. To overcome this problem, the MTDS is being developed. MTDS is a rapid, semi-automatic, integrated tactical data system. It uses inputs from the radars with data processing and computing equipment to provide greatly increased air control information. Each TAOC will be able to track more than 150 aircraft simultaneously, conduct up to 37 simultaneous intercepts and 23 simultaneous vectors to specified fixed locations. In addition, up to 16 surface-to-air missile firing units may be directed. Because of the integration of SAM, interceptor, and air traffic control into a complementary anti-air warfare/air control system, the name of the MACS operations center has been changed from Counter-Air Operations Center (CAOC) to Tactical Air Operations Center (TAOC). The TACC will also be made more responsive because of MTDS. The Tactical Air Commander will get information on up to 400 tracks of interest simultaneously, and will have his picture updated approximately every 50 seconds.

MTDS began as a result of a study by the Advanced Research Group at Quantico in 1955. That Group decided that the Marine Corps needed a great increase in air defense control capability. In 1957, after competitive bidding, the Bureau of Ships let a contract for MTDS to Litton Industries. The first year was occupied with the study phase. In 1958, hardware development was started. The first TAOC was delivered in September 1961 to MCAF, Santa Ana, where MACS-3 is still conducting the service test. The second TAOC was delivered to Twentynine Palms in June 1962. This set was used to test missile control and system integration and was returned to MACS-3 at Santa Ana, in early FY-65. The TACC was delivered in early CY-1963 to MACS-3, and is being used to test total system integration. The Tactical Data Communications Central (TDCC), which buffers MTDS into NTDS (Navy Tactical Data System) and ATDS (Airborne Tactical Data System) was also received in early CY-1963. Preliminary tests with the NTDS at San Diego and the ATDS at Point Mugu are progressing satisfactorily. The capability is also provided for buffering into the NATO and Air Force Data System when final data standards are set for those systems. To date, approximately \$40.9 Million has been spent for MTDS,

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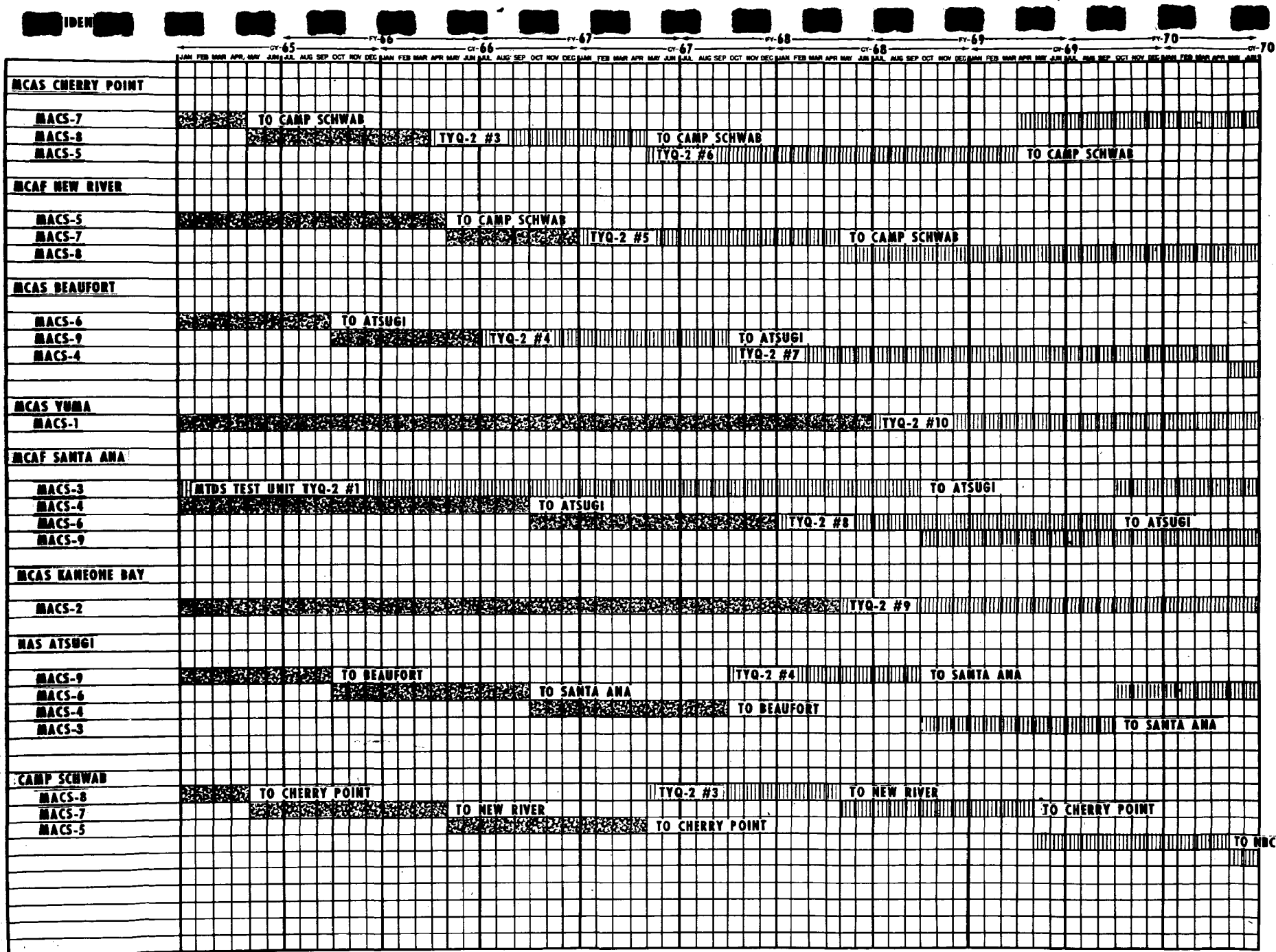
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and \$3.5 Million will be spent in FY-65. It is expected that about \$3 Million a year will be spent in R&D through 1971 to improve the capabilities of MTDS and to more efficiently integrate all elements of the Marine Air Control System.

Some increase in personnel will be required within the MACS. It is estimated that about 20% more personnel will be required (4 officers, 37 enlisted per MACS).

The first production TAOC delivery is estimated for early FY-66, with remaining TAOCs and TDCCs scheduled to start in late FY-66. Complete TAOC delivery is expected by end of FY-69. TACC delivery is planned to start in FY-67 and end in FY-69. Squadron rotation is indicated on Page II-V-4-6, while Page II-V-4-7 is a pictorial presentation of MTDS and associated elements.

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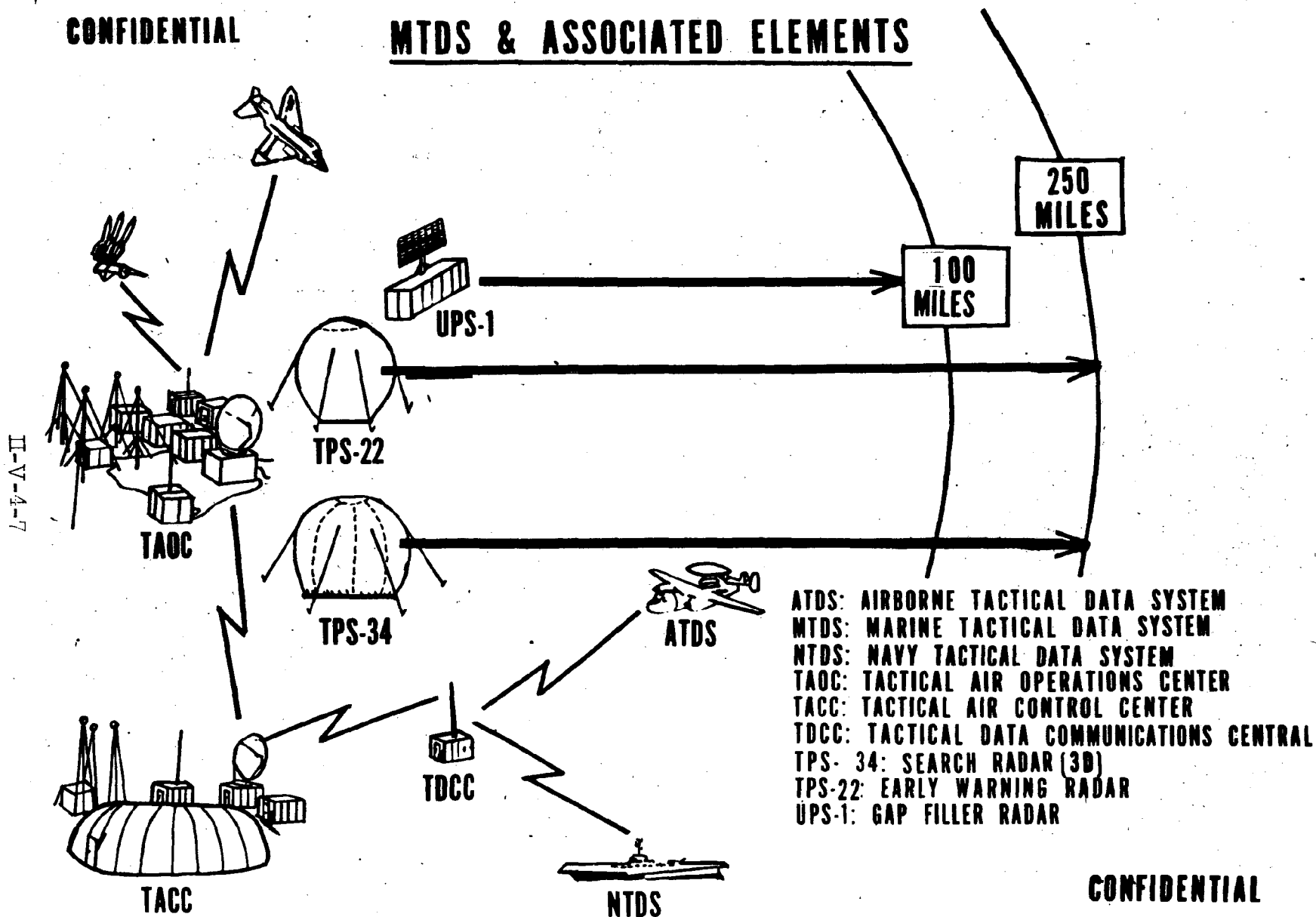
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## MTDS & ASSOCIATED ELEMENTS



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## MARINE AIR TRAFFIC CONTROL UNIT (MATCU)

1. Description - The MATCU equipment presently being introduced to the Fleet Marine Force is the result of the development of rugged, reliable and easily transportable air traffic control equipment required for use at SATS or other expeditionary airfields.

2. Major Components:

a. AN/TSQ-18 Radar Surveillance Central - The AN/TSQ-18 is a helicopter transportable air traffic control facility consisting of a GCA shelter and an Operations Surveillance Shelter. These shelters contain the radar displays from the TPN-8 GCA, UPS-1 radar HF, UHF, and SSB communications equipment. Operationally, the shelters are mated end-to-end to provide one large integrated control central.

b. AN/UPS-1 Radar - The UPS-1 is a lightweight, medium range, surveillance radar operating in the L-Band. The radar set is housed in a helicopter transportable shelter with the antenna mounted on the shelter while operating. The antenna is dismantled and stowed on a pallet with auxiliary equipment in the transport configuration. Radar presentation is remotely displayed in the TSQ-18.

c. AN/TPN-8 GCA Radar - The TPN-8 is a lightweight, helicopter transportable, precision air traffic control approach radar for use in all weather conditions at SATS, expeditionary airfields and heliports. This set is an X-Band radar with dual purpose precision/surveillance scopes capable of simultaneous presentation. Display normally remoted to TSQ-18. Antennas may be easily and quickly rotated manually for multiple run-way coverage. (Two per MATCU.)

d. AN/TRN-14 TACAN - A helo-transportable radio beacon used as the ground station in a Tactical Air Navigation System (TACAN). Provides distance (DME) and bearing information to aircraft equipped with TACAN transceivers. May operate on any one of 126 channels.

e. AN/TSA-11/13 Control Tower - The TSA-11 or 13 is a lightweight helicopter transportable airfield control tower. Has recently been modified to enable it to be self erected without the aid of a crane. Contains communications equipment, a UHF direction finder and visual control aids required for airfield traffic pattern control.

f. AN/GRC- ( ) Mobile Control Tower - This tower is a small lightweight unit containing UHF communications equipment and visual control aids. Its primary use will be as a runway control for the Landing Signal Officer or wheels watch. May be used as the primary control tower during the early stages of establishment of an expeditionary airfield, SATS site or heli-port.

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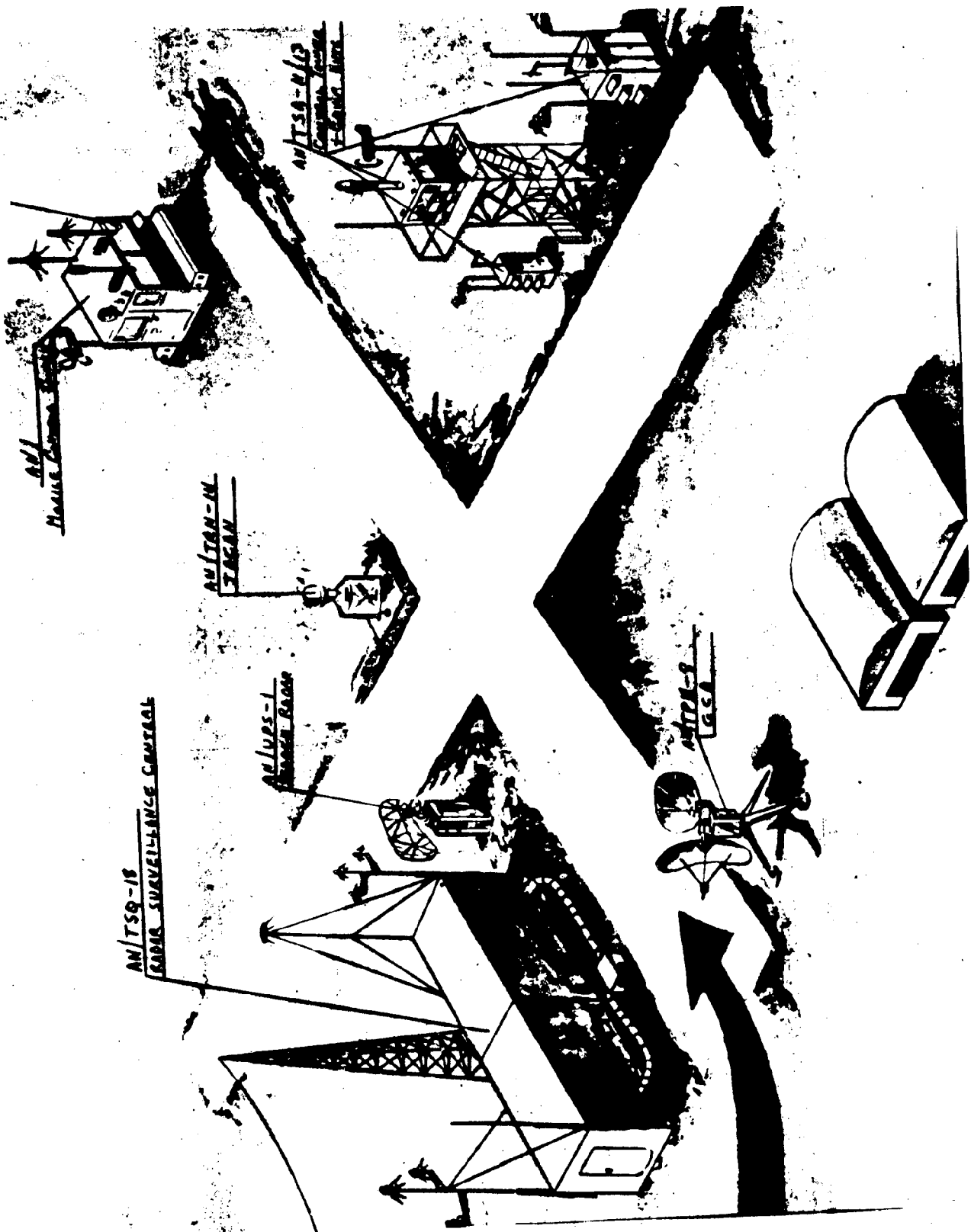
## MATCU PROCUREMENT

Nomenclature	Life Expect.	66	67	68	69	70	71	72	73	74
TRN-14 TACAN	7	12		4						
UPS-1 Radar	7	6		2						
Maintenance Shelters	10	12	4	2						
Equip. Storage Shelters	10	12	4	2						
GRC-( ) Mobile Cont. Tower	7	5	3							
TPN-8 GCA Radar	10	12		4						
UHF-Doppler Direction Finder	10	17	2							
TSQ-18 Radar Surv. Central	7	6								
Command Intercom System	10	13	2							
TAILS - Auto. Inst. Log. System	7									
TSQ-18 Appr. Control Extension	7	13								
TRN-( ) UHF Homer	10	17	2							
TRN-16 LF Homer	10	6	2							
TRN-( ) Lightweight TACAN	7		8							
IPN-8 MTI Kit for TPN-8	7		38							
TRN-14 Replacement	10						22			
UPS-1 Replacement	10						11			
TSQ-18 Replacement	10						11			

Note - Equipment procurement subsequent to FY 1970 will fall under the Advanced Command Data System - Navy/Marine

(Navy procurement)

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up to 120

SHORT AIRFIELD FOR TACTICAL SUPPORT (SATS)

1. GENERAL CONCEPT. To provide the Fleet Marine Forces with an expeditionary airfield (SATS) capable of launching, arresting, arming, de-arming, refueling and maintaining the tactical aircraft of a composite Marine Aircraft Group for a period of ~~30~~ <sup>up to 120</sup> days under all-weather conditions. Timely utilization of SATS components provides a means of positioning Marine Corps tactical aircraft within efficient supporting distance of the landing force, as soon as possible ~~after~~ <sup>during</sup> the assault phase, in order to provide continuous air support and air defense. The ~~(SATS)~~ expeditionary airfield package provides the Fleet Marine Forces the flexibility and capability of conducting combat air operations in support of a Marine Expeditionary Corps (MEC), a Marine Expeditionary Force (MEF), a Marine Expeditionary Brigade (MEB), or a Marine Expeditionary Unit (MEU).

2. SPECIFIC CONCEPT. The development of each SATS system will be unique since each installation must be tailored for the anticipated operational and environmental conditions. The characteristics of an operational SATS will be influenced by site characteristics, numbers and types of aircraft programmed to operate therefrom and equipment required for installation and operation. In view of this, the SATS is compatible and complimentary to the incremental introduction concept of combat Marine Aviation and supply support. It must be realized that wherever an established permanent airfield exists, which can be tactically secured and utilized, only those SATS components necessary to provide full operational capability will be needed.

a. It is envisioned that SATS systems will be phased ashore in the following increments:

(1) Minimum Installation. Only enough airfield matting to provide a 2000 - 3000 foot airstrip, one parallel taxiway and two hotpads. In addition, <sup>the</sup> ~~one~~ catapult, two arresting gear, some TAFDS, ordnance and communications equipment will be required. This installation will be capable of rapid employment and designed to support

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Chapter V, Part II

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six to twelve aircraft for strip-alert, VFR operations only for a period of about 10-15 days. Only flight line type maintenance will be available, utilizing a minimum of aviation and ordnance personnel.

(2) Interim Installation. As the tactical situation continues and develops, additional matting and other SATS components should be echeloned to the site in order to increase the number of taxiways and to provide a larger area for aircraft parking and maintenance. During this phase of buildup, an additional catapult may be required due to increase sortie rate. Additional TAFDS, ordnance, <sup>and</sup> communications equipment would also be required. Airfield lighting could be added and some capability of MATCU could be installed. Ideally, the completion of the interim installation should be capable of supporting one squadron of tactical aircraft for a period of at least 30 days. The squadron would provide its own intermediate maintenance and the installation ~~will~~ be capable of providing all-weather operation, if deemed necessary. *would*

(3) Group Installation. Continued enlargement of the initial minimum SATS installation ~~will~~ be in accordance with the dictates of the tactical needs. The maximum installation <sup>would</sup> require all of the SATS peculiar components and the remaining additional matting, <sup>in order</sup> to provide a base capable of supporting the tactical aircraft of the Composite Marine Aircraft Group for at least 30 days under all-weather conditions. The MAG would provide its organic intermediate maintenance capability.

(4) ~~The Expeditionary Airfield~~ <sup>would be developed with fixed wing Air support</sup> ~~is required indefinitely.~~ <sup>it is determined that</sup>

(5) ~~(4)~~ Echelonment of Equipment and Personnel. The following is an example of the on-site arrival sequence of certain equipment and personnel to support the above installation buildups:

(a) Sufficient communication equipment to ensure control of the initial installation and operations, i. e., AN/PRC-56 headsets, AN/TSA-13 control tower, etc.

(b) Matting, preloaded on low-boy trailers accompanied by mat-laying crews.

(c) Heavy equipment such as cranes, forklifts, air compressors and generators accompanied by equipment operators and maintenance personnel.

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(d) Arresting gears accompanied by installation crews and operators.

(e) Catapults accompanied by installation crew and operators.

(f) A preplanned portion of base construction components such as vans, tents, shelters, and other general support equipment accompanied by an appropriately sized base construction team.

(g) Tactical airfield fuel dispensing system (TAFDS) accompanied by an installation crew.

(h) SATS buildup equipment such as additional matting, airfield lighting, MATCU equipment, housekeeping items, spare parts and spare support equipment necessary for extended operations.

3. COMPONENTS. The major equipments of the SATS ~~expeditionary~~ airfield system are: AIRFIELD MATTING, CATAPULT, ARRESTING GEAR, AIRFIELD LIGHTING and OPTICAL LANDING AIDS. All of the components will be packaged for long term preservation and the maximum package weight should not exceed 6000 lbs.

#### 4. DESCRIPTIVE SUMMARY OF EQUIPMENTS.

##### a. AIRFIELD MATTING.

1760 TONS

Weight - 1572 Tons

109,000 CU F

Volume - 95,000 Cu. Ft.

96.

Est. Unit Cost - \$90/plank

21,000

1750

No. Required - 18,750 planks - 1563 pallets

Airfield matting provides the level runway, taxi, and parking areas needed for SATS. The operational SATS matting, designated AM-2, consists of extruded aluminum sections, with connectors welded on. Capable of withstanding aircraft landing impacts and jet blasts, the AM-2 meets fully the stringent handling, installation, strength, weight, production, cost and operational requirements of SATS.

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In terms of cube and tonnage, matting is the largest SATS component. Each full mat is 12 feet long, 2 feet wide, and 1 5/8 inches thick. Half-mats, 6 feet by 2 feet, are also required. Weighing 6 pounds per square foot, or 144 pounds per full mat, the AM-2 matting can be interconnected to form a covering of virtually any shape or extent.

Mats are shipped in pallet assemblies, each weighing 2011 pounds. These are placed at prearranged locations around the SATS area. Each pallet contains eleven full mats and two half-mats, for 288 square feet of coverage. The mats are laid down by two-man teams. A full mat begins the first row and half-mats begin each alternate row, giving a brickwork pattern for greater strength. The mat-laying rate is 250 square feet per man-hour. About 480,000 square feet of matting is required for a typical SATS. 504 000

The mats are covered with a non-skid coating. Accessories, such as aircraft tie-down hooks, can be attached to the matting as needed.

out (\*)  
b. CATAPULT.

<sup>527,178</sup>  
Weight - 78,400 lbs.

<sup>114,636</sup>  
Volume - 6175 Cu. Ft.

<sup>1375,000</sup>  
Est. Unit Cost - \$1,545,850

No. Required - 2

The CE-1 MOD 3 is the SATS operational catapult. Designed for bi-directional launch capability, the CE-1 MOD 3 is powered by two General Electric LM1500 engines, each using a J79-2 gas generator. This catapult system will launch a 59,000 pound aircraft (e. g., F4B), at sea level, at a 100°F temperature reading. The need for a launching track has been eliminated by development of a special dolly that tows the plane along the field.

Power generated by the engines is transmitted through a reduction gear and capstan to an endless steel launch cable. From the capstan, the cable travels first through a cable tension compensating device, and then to deck sheaves that direct it along the launch path

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and return. The airplane to be launched is bridled to the dolly, which is then clamped to the launch cable. At the end of the launch stroke, catapult power is reduced to idle, the dolly is arrested and returned to battery position, and the launch cable is stopped by a brake located on the capstan shaft. All launch controls and monitoring devices are centered at a main control console which receives operational sequence signals from a deck edge panel.

c. ARRESTING GEAR.

<sup>27,500</sup>  
Weight - 20,000 lbs.

<sup>1500 cu</sup>  
Volume - 650 Cu. Ft.

<sup>92,000</sup>  
Est. Unit Cost - \$78,000

No. Required - ~~14~~

The M21 Arresting Gear System, operational on SATS fields, consists of two identical installations, one on each side of the landing area. Each installation comprises a power unit and a main arresting gear. The main gear includes an energy absorber, and a horizontal drum of 11 inch nylon tape (purchase tape).

During SATS landings, the aircraft arresting hook engages a 1 1/4 inch wire rope pendant. A spring-type wire support keeps the pendant in a raised position so that it can be easily engaged by the aircraft arresting hook. There are two supports per pendant.

Each end of the pendant is connected to the purchase tape that is reeved through vertical rollers and is wrapped on the horizontal drum. Once the aircraft hook engages the pendant, the purchase tape unwinds from the drum, causing a rotor, with fixed pitch blades, to rotate within a container of pressurized fluid. The resistance of the fluid to the rotor's motion results in a programmed arrestment. The heat generated during arrestment is dissipated by a fluid, eliminating the need for a cooling system. Friction brakes absorb all residual energy.

The power unit, run by a three-cylinder diesel engine, retracts the system to battery position after an arrestment.

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d. AIRFIELD LIGHTING.

~~47,997~~  
 Weight - ~~14,800~~ lbs.  
~~2780~~  
 Volume - ~~559~~ Cu. Ft.  
~~61,400~~  
 Est. Unit Cost - ~~\$50,000~~

No. Required - 1

A field lighting system consists of an airfield beacon, approach lights, obstruction lights, taxiway lights, circling guidance lights, threshold lights, and runway lights. This system, designed for transportability and ease of installation, will operate in temperatures ranging from -40°F. Further, the cables, connectors, and flush-type lights are operative when submerged in water. Elevated lights and other ground components can operate in driving rain and snow. The lighting is sufficient for day and night operations under visibility conditions down to two hundred feet and one-half mile. It will accommodate a traffic pattern which includes the air space within a three-mile radius of the airfield to a height of 1500 feet.

e. OPTICAL LANDING SYSTEM.

~~10,416~~  
 Weight - ~~2800~~ lbs.  
~~1900~~  
 Volume - ~~561~~ Cu. Ft.  
~~40,000~~  
 Est. Unit Cost - ~~\$35,000~~

No. Required - 2

The visual glide slope indicating system for SATS is the Fresnel Lens Optical Landing System Mark 8 MOD 0. This is a trailer-mounted system which uses the components of the Shipboard Mark 6 MOD 0 FLOLS and gives to the incoming pilot glide slope information which is exactly the same as that of the shipboard system. The basic angle of the system is set by a jack located in the vicinity of the towing pintle and can be fixed at any desired angle between three and five degrees.

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5. DELIVERY SCHEDULE OF COMPONENTS.

a. The Marine Aircraft Group is the task organization that will be the final custodian of all SATS components except airfield matting. In view of this, the following schedule is presented by MAW/MAG where applicable:

<u>UNIT</u>	<u>EQUIPMENT</u> <u>AM-2 MATTING</u>	<u>ETA</u>
1st MAW	Harvey Aluminum Washington Aluminum Butler Mfg. Co.	1,093,676 Sq. Ft. on Hand
2d MAW	"	753,120 Sq. Ft. on Hand
3d MAW	"	994,000 Sq. Ft. on Hand
<u>CE 1 MOD III CATAPULT</u> All American Engr. Co.		
1st MAW/MAG-11	(2)	AUG 1965
2d MAW/MAG-14	(2)	SEP 1965
1st MAW/MAG-12	(2)	OCT 1965
3d MAW/MAG-15	(2)	NOV 1965
2d MAW/MAG-31	(2)	DEC 1965
3d MAW/MAG-33	(2)	JAN 1966
2d MAW/MAG-24	(2)	FEB 1966
2d MAW/MAG-32	(2)	MAR 1966
1st MAW/MAG-13	(2)	APR 1966
1st MAW	(1) SPARE	MAY 1966
2d MAW	(1) SPARE	MAY 1966
3d MAW	(1) SPARE	JUN 1966
	21	

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<u>UNIT</u>	<u>M-21 ARRESTING GEAR</u> <u>Vortec Products Co.</u>	<u>ETA</u>
1st MAW/MAG-11	(4)	SEP 1965
2d MAW/MAG-14	(4)	OCT 1965
1st MAW/MAG-12	(4)	NOV 1965
	<u>12</u>	

NOTE: Above 12 units to be delivered under sole source contract.  
Remaining 31 units to be procured competitively and to be  
delivered in increments of 4 starting DEC 1965.

	<u>AIRFIELD LIGHTING</u> <u>Oxford Corp.</u>	
1st MAW/MAG-11, MAG-12	(3)	FEB 1965
MAG-13	(1)	FEB 1965
2d MAW/MAG-14, MAG-24		
MAG-31, MAG-32	(5)	MAR 1965
3d MAW/MAG-15, MAG-33	(3)	APR 1965
	<u>12</u>	

NOTE: Above schedule may be delayed due to lack of funds for  
packaging.

	<u>FRESNEL OPTICAL LANDING SYSTEM</u> <u>NAEC Philadelphia</u>	
1st MAW/MAG-11, MAG-12	(5)	MAR 1965
MAG-13	(2)	APR 1965
2d MAW/MAG-14, MAG-24	(5)	MAY 1965
MAG-31	(2)	MAY 1965
MAG-32	(2)	JUN 1965
3d MAW/MAG-15, MAG-33	(5)	JUN 1965
	<u>21</u>	

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6. IN-GARRISON UTILIZATION.

a. To insure continuous training for pilots and SATS ground personnel (MOS 7000), and to provide periodic assurance that SATS equipment is in constant operational readiness, it is mandatory that each MAG (VF/VA) operate their SATS system and personnel during each Calendar or Fiscal Year. Each MAW will be expected to maintain a semi-permanent SATS training site into which each assigned MAG may schedule periodic expeditionary environmental training. At the present time <sup>two</sup> SATS training sites are available, MCOLF Bogue Field, 2d MAW and MCAS El Toro, 3d MAW. <sup>Acquis-</sup> <sup>motabw 00000</sup> <sup>1st MAW</sup> ition of real estate will be necessary to provide a SATS training site in the 1st MAW area and for MAG-13, 1st MARBRIG.

b. To facilitate the above desired training, the NATOPS manual will be revised. Each tactical VF/VA squadron syllabus will reflect approximately the following amount of SATS training per pilot.

- (1) Six Catapult Shots (Day)  
Four Catapult Shots (Night)
- (2) Six Arrestments (Day)  
Four Arrestments (Night)
- (3) Ten TACAN/GCA approaches providing MATCU/ARN-14 equipment is available.

The above training will provide a portion of NATOPS Phase II and will represent a certain percentage towards combat readiness. It is not expected that SATS training will lengthen the present syllabus since all flights launched from SATS can have a dual mission

*Component*  
C. Use of SATS by Marine Wing Corps

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SUPPORT EQUIPMENT1. GENERAL CONCEPT.

a. The procurement, distribution, maintenance, and control of Aircraft Maintenance Support Equipment (AMSE) is considered an integral part of the task of maintaining aircraft. AMSE fulfills the purpose of servicing and maintaining aircraft systems or aircraft equipment. The Naval Aircraft Maintenance Program establishes procedures and assigns responsibilities to insure optimum utilization of equipment. Planning, programming, and budgeting for this equipment is accomplished by the ~~Bureau of Naval Weapons~~ <sup>NAVAL AIR SYSTEMS COMMAND</sup> in response to Fleet requirements or technological requirements generated within the Navy, or in some cases, by the Air Force or Army.

b. Support equipment, like the current and future generations of aircraft it supports, has increased in sophistication, cost and complexity. The expeditionary requirements of Marine Corps aviation necessitate ~~consideration~~ <sup>elements</sup> of numerous factors in the planning and programming process. Some of the salient are:

(1) Equipment must be tailored to the concept of incremental introduction of support for aviation units into advance bases or combat areas.

(2) Multi-purpose, versatile equipment, capable of operating in environmental extremes is required.

(3) Equipment must be rugged, reliable, and easily maintained.

(4) Commonality of equipment for servicing various types of aircraft, together with significant reductions in numbers, size, weight, cube, and complexity is desired.

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2. MARINE CORPS OBJECTIVES.

a. Provide skilled personnel to perform intermediate level maintenance on AMSE.

b. In conjunction with the ~~Bureau of Naval Weapons~~ *Naval Air Systems Command*, develop and implement a planned program of equipment overhaul together with programmed retirement and replacement of overage/obsolete equipment economically impracticable to repair.

c. Increase participation in planning and programming the future family of AMSE to satisfy Marine Corps requirements.

3. DISCUSSION OF OBJECTIVES.

a. The requirement for proper performance of intermediate level maintenance has been stated by field activities. A separate MOS field for AMSE maintenance ~~is being~~ <sup>has been</sup> developed. The staffing criteria for inclusion of these personnel in T/Os is ~~under study~~ *BEING DEVELOPED*. The inclusion of trained personnel in Marine Corps aviation units to service this equipment will greatly alleviate the present situation (i. e., utilizing aircraft maintenance personnel to perform this work) and result in better equipment availability and reliability.

b. Presently, the ~~Bureau of Naval Weapons~~ *Naval Air Systems Command* Fleet Readiness Representatives schedule overhaul of major items of AMSE as funds become available. This level of maintenance is beyond the intermediate capability of Marine Corps aircraft maintenance activities. However, no scheduled program for major overhaul of Fleet Marine Force AMSE at Public Works Centers or Overhaul and Repair activities exists. Development of such a program, and provision of funds to implement it, will greatly increase the efficiency and effectiveness of the equipment to perform its designated task.

c. AMSE is generally divided into Special Support Equipment (SSE) and General Support Equipment (GSE). SSE is characterized by its application to a special aircraft model, while GSE is common to a number of aircraft and/or engines. The delineation, however, is not this clear-cut; equipment peculiar to one aircraft may, over

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its life span, be utilized for servicing a number of types of aircraft, and become in essence GSE. SSE is normally procured under the appropriation PAMN (Procurement, Aircraft and Missiles, Navy). GSE is generally funded under the appropriation OPN (Other Procurement, Navy) which is broad in scope. However, certain items of each type of AMSE are funded by both appropriations, depending on the phase of the aircraft in procurement or in inventory, and sometimes as contract stipulations.

d. The development of Special Support Equipment parallels the development of the aircraft; complete allowance lists of SSE become available concomitant with aircraft production and delivery schedules. PAMN funds programmed for procurement of these aircraft include the related SSE. Special Support Equipment sets must be provided each squadron upon phasing-in of these aircraft. (See attached chart)

e. The Department of the Navy Five Year <sup>DEFENSE PROGRAM,</sup> ~~Force Structure and Financial Program~~ under the Program Element "Marine Air Wings," projects PAMN and OPN appropriations five years into the future. This projection is statistical; no actual shopping list is compiled. Marine Corps portions of these funds can be identified, but specific equipment purchases cannot. For example, under OPN, budget activity number 1940D, Handling, Shop and Test Equipment, the following funds are programmed for purchase of GSE (In \$000).

	FY-66	FY-67	FY-68	FY-69	FY-70
Investment					
Operating	I O	I O	I O	I O	I O
86	<u>7460</u>	105 <u>11691</u>	108 11695	108 11695	108 11695

These funds are for normal replacement and procurement of new equipment, and include hydraulic test stands, air start systems, portable air conditioners, mobile electric power plants, machine tools, etc. However, a detailed shopping list of the equipments to be procured each Fiscal Year is not available, and the projected level funding is subject to change.

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*Naval Air Systems Command*  
 f. The ~~Bureau of Naval Weapons~~ has technical cognizance and financial responsibility for AMSE, and is staffed to accomplish these projects. Marine Corps aviation personnel within this staffing framework are responsible for assuring that Marine Corps requirements are satisfied to the maximum extent possible within technical and funding limitations. Planning, programming, and stating requirements for AMSE is an enormous task. Constant effort is being directed toward improved management procedures. ~~The compiling of Individual Material Readiness Lists (IMRL) of support equipment in each Navy/Marine Corps aviation unit will provide a world-wide inventory of equipment numbers and condition. Implementation of the 3M System will provide data for analysis of aircraft and support equipment maintenance. These programs will complement each other, and will allow more adequate planning and programming of AMSE in furtherance of Marine Corps objectives.~~ *However,*

*Marine Corps aviation will resist complete adoption of Navy outfitting and maintenance policy for AMSE on the basis of the requirement to hold agencies accountable and to hold inventory and stocks as a joint readiness.*

*One objective of Marine Corps aviation is implement ~~it will be the objective of HQMC to~~ the present Policy of separate allowance lists and outfitting policy for FMF aviation units and to assure that equipment is provided ~~to~~ *as organizational equipment* in line of being provided on a Sile basis.*

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←A/C

SPECIAL SUPPORT EQUIPMENT REQUIREMENTS  
SQUADRON/AIRCRAFT

*ck AAP MKED.*

AIRCRAFT TYPE	FY-66 MAW			FY-67 MAW			FY-68 MAW			FY-69 MAW			FY-70 MAW		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
F4B/RF4B		2/18	3/42	2/21	2/21										1/15
F4J					1/15			1/15	1/15			1/15			
A6A		2/24				2/24		1/12							
A7A								2/40			1/20			1/20	
EA6B									1/3	1/6	1/9				
CH46A		1/24	1/24		1/24	2/48		1/24	3/48		1/24	3/48		1/24	
CH53A			1/19		1/20	1/24	1/6	1/4	1/6						
UH1E	1/9	1/10	1/7												
F8D	1/15														
OV10A								1/12	1/15	1/12	1/6	1/9			

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SECTION "M" (MOTOR TRANSPORT AND ENGINEER ITEMS)

1. OBJECTIVE. Modernization and standardization of Wing motor transport is the prime objective during this program time frame. To implement standardization of these equipments, management of those items common to Division units will be transferred from the Bureau of Naval Weapons to the Marine Corps. Procurement has been programmed to eliminate deficiencies and overage equipment. Continued emphasis will be placed on procurement of equipments operable on JP fuels.

APPENDIX 7 TO  
CHAPTER V, PART II

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MAINTENANCE

## A. STANDARD NAVY MAINTENANCE AND MATERIAL MANAGEMENT SYSTEM (3M)

1. BACKGROUND:

a. The 3M System is the outgrowth of the service evaluation of Air Force Manual 66-1 by Navy units at NAS Oceana, and Marine Aircraft Group 24. It is designed to provide maintenance and material management information for all levels of management. The system is designed to provide all known requirements for the accumulation, processing and compilation, by EAM/ADP equipment, of man-hour data, maintenance data, and aircraft statistical data. The major objectives of the system are to:

(1) Improve local maintenance and material management.

(2) Improve management and budget justification at departmental level.

(3) Improve aircraft readiness.

b. Major differences exist between the Navy and Marine Corps in maintenance and supply support concepts. Because of assigned mission and tasks, and the organization of the FMF, Marine Aircraft Group operations are more comparable to Navy carrier operations than to station supported Navy shore based operations. Marine Corps aviation logistics are oriented to a self-supporting land based operational concept. In view of the deployable requirements of FMF aviation, it is considered essential that FMF participation in the 3M System be supported without reliance on the supporting shore establishment.

2. STATUS:

a. At present, insufficient ADP capability exists to support the 3M System in the FMF. In the interim period prior to determination and programming of requirements, such assistance as may be necessary will be provided by the supporting shore establishments. During the implementation phase and as experience is gained, effort will be directed to develop the 3M System as a deployable, independent Wing capability standardized within the FMF to the maximum extent practicable with regard to system maintenance, supply and administrative procedures.

b. The 3M System implementation commenced 1 January 1965 in the 2d and 3d MAWS. The schedule is currently based on sequential on-site training by Marine Aircraft Groups based on a training rate of three months per MAG(VF, VA) and MWSG and four months per MAG (H). It is estimated that the implementation phase, including supporting stations, will be concluded during the 3d Quarter of FY 1966 for the 3d MAW and during 1st Quarter of FY 1967 for the 2d MAW. The 1st MAW is scheduled to commence implementation on 1 ~~January~~ <sup>Oct</sup> 1966; however, ~~earlier implementation will be approved, if determined possible.~~

c. Maintenance Data Analysts will receive formal training at NATTC, NAS Memphis, Tennessee. A MOS (enlisted Category B) is *✓ 8091* under development. Appropriate T/Os will be modified to provide *Have been* analysts as a part of the Special Staff. PO67 contains personnel requirements in support of the FMF. Military personnel requirements of non-FMF activities will be filled from existing resources.

*The off's security plus is 4603.*

## B. SECTION "M"

a. Field evaluation of Phase III of the Troop Test pertaining to centralized maintenance at Wing level of selected heavy motor transport, engineer and related equipments will be accomplished in 2d MAW during FY 1966.

*Aircraft Maintenance*

## C. AVIATION SUPPORT EQUIPMENT TECHNICIAN

a. ~~It is anticipated that the Navy will approve the proposal for an Aviation Support Equipment Technician rating with Navy enlisted classifications in mechanical, electrical and hydraulic skills. The Marine Corps will establish and Staff T/Os with similar MOSs to provide for support of the increasingly complex family of aircraft maintenance support equipments.~~

*Aircraft Maintenance Support Equipment*

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AVIATION SUPPLY AND ~~FISCAL~~ MATTERS

1. PURPOSE. To state a concept for Supply and ~~Fiscal~~ Support of Marine Corps aviation and to state objectives to be achieved during the period covered herein.

2. CONCEPT. The Marine Corps Aviation Supply System is an integral part of the Marine Corps and Navy supply systems and <sup>is</sup> also dependent to some degree upon the DOD supply system. Operating and mount-out stocks of Navy and Marine Corps material at prescribed support levels will continue to be required and <sup>will be</sup> carried in separate supporting accounts within FMF aviation units. These stocks will have been expended from Navy and Marine Corps stock accounts; therefore, O&M funds are provided from both sources to fund inventory in the operating organizations.

3. OBJECTIVES.

a. To reduce the requirement for maintenance of duplicate stocks of Navy and Marine Corps funded material to the maximum extent possible.

b. To increase the mobility of FMF aviation units by the reduction of weight and cube.

c. To obtain lighter weight containers for combat warehousing of FMF aviation mount-out stocks without sacrifice of strength and to improve combat warehousing methods.

d. To improve the readiness position of the 4th Marine Aircraft Wing by assuring the protection of adequate mount-out stocks in CNO Special Project HAIL.

e. To develop plans for incremental introduction of supply to meet contingency plans of MEBS, MEFs and operations involving individual units.

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f. To obtain the capability to transmit and receive supply intelligence both within the Wing and with external supply sources by other than land lines.

g. To institute revised funding procedures for the withdrawal of Class II(A) and IV(A) stocks held in CNO Special Projects, i.e., without citation of Wing held OPTARS. *Final*

h. To seek revisions to DOD procurement guidelines to provide a minimum of 20 Wing/months of Class II(A) combat support.

i. To integrate LAAM Battalions into the aviation maintenance and supply organization.

j. To provide for the allotment of Navy O&M funds, similar to Project 40 (MAEE) funds, to the CG MARTCOM for O&M of approved Navy training allowances. *Done*

k. Take steps to standardize inventory management policies for all supporting stores held by AirFMF direct support activities.

l. Mechanize the supply accounts at the Group level. <sup>aviation</sup> add to

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4TH MAW SUPPORT EQUIPMENT

1. Description. The 4th Marine Aircraft Wing is within approved force levels and is to be organized and equipped in a manner similar to the Marine Aircraft Wing described as Program Element 3 28 40 01 3. Aircraft to be assigned are as indicated in Appendix 11.

TAB B

2. Outfitting Concept. Prior to mobilization, units comprising the 4th Marine Aircraft Wing will continue training as drill pay units at reduced strength. Marine Corps-furnished (Class II) equipment and material has been furnished 4th MAW units to accomplish training. There is a shortage of Navy-furnished training equipment and a shortage of Navy O&MN funds to support training requirements.

Thirty days after mobilization, full allowances of Navy-furnished Class II(A) and IV(A) material will be required. OPNAV INST 04080.29 authorizes the protection of Navy assets to support the 4th MAW as project HAIL. Requirements to be held in stock under project HAIL will be the difference between total Class II(A) and IV(A) requirements and that equipment already held as training allowances plus equipment already within the Reserve Training Command which will become a 4th MAW asset upon mobilization.

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APPENDIX 10 to  
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3. Cost Summary

(Program Element 5 10 34 10 3)

a. Funding Required for Training:

(\$ Thousands)

<u>ITEM</u>	<u>FY-65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>	<u>71</u>	<u>72</u>	<u>73</u>	<u>74</u>	<u>75</u>
<u>O&amp;MN FUNDS</u>											
O&M of 4th MAW Expeditionary Equipment (Proj 40 type)	27	75	260	290	320	320	320	320	320	320	320
Initial Outfitting, NSA Supplies and Equipment (TBA)	0	80	8	8	8	8	8	8	8	8	8
<u>OPN FUNDS</u>											
GCA Equipment for 4 MATCU's	0	4200	0	0	0	0	0	0	0	0	0
Section "M" Equipment	150	800	0	0	0	0	0	0	0	0	0

b. Funding Required to Provide Balance of Mobilization Requirements (Project HAIL)

<u>ITEM</u>	<u>FY-65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>	<u>71</u>	<u>72</u>	<u>73</u>	<u>74</u>	<u>75</u>
<u>STOCK FUNDS</u>											
To obtain and protect NSA allowance items for Proj HAIL	0	1410	0	0	0	0	0	0	0	0	0

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(\$ Thousands)

	<u>FY-65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>	<u>71</u>	<u>72</u>	<u>73</u>	<u>74</u>	<u>75</u>
<u>PAMN FUNDS</u>											
R&V Cog not available ASO Stock	0	3813	0	0	0	0	0	0	0	0	0
R&V Cog Assets available in ASO Stock which will require funds for stratification as Proj HAIL	0	5180	0	0	0	0	0	0	0	0	0
<u>OPN FUNDS</u>											
Photo, Aerological, Class IV(A) and other requirements covered by Sections L, P, Z, H and E BUWEPS Allowances	*NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA
Section "M" **	3450	2800	3600	3600	3600	0	0	0	0	0	0
<u>O&amp;MN FUNDS</u>											
Knockdown Furniture (TBA)	0	200	0	0	0	0	0	0	0	0	0

\*NPA - No Price Available. Allowances and costs applicable to total Wing requirements have not been completed.

\*\*Included in FYFS&FP @ 3.6 annually through FY 1969

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	(\$ Thousands)										
<u>TOTALS</u>	<u>FY-65</u>	<u>66</u>	<u>67</u>	<u>68</u>	<u>69</u>	<u>70</u>	<u>71</u>	<u>72</u>	<u>73</u>	<u>74</u>	<u>75</u>
O&MN	27	355	268	298	328	328	328	328	328	328	328
Stock Funds	0	1 410	0	0	0	0	0	0	0	0	0
OPN	3600	7800	3600	3600	3600	0	0	0	0	0	0
PAMN	<u>0</u>	<u>8993</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
TOTAL	3627	18,558	3868	3898	3928	328	328	328	238	328	328

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15 February 1965

AIRCRAFT AVAILABILITY/PROGRAM OBJECTIVES M-DAY

AIRCRAFT	FY-66	FY-67	FY-68	FY-69	FY-70	FY-71	FY-72	FY-73	FY-74	FY-75
5 10 34 10 3										

4th Marine Aircraft Wing

VF-FB	F-8	100/75	100/75	100/75	100/75	100/75	75	45	15	-	-
	F-4B	-	-	-	-	-	-	30	60	75	75
VA-L	A4B	80/80	80/80	40/40	-	-	-	-	-	-	-
	A4C	-	-	40/40	80/-	80/-	-	-	-	-	-
	A4E	-	-	-	-/80	-/80	80	60	40	40	-
	A7A	-	-	-	-	-	-	-	-	-	40
VA-M	A6A	-	-	-	-	-	-	15	30	30	30
VF-P	RF8A	9/9	9/9	9/9	9/9	9/9	9	9	-	-	-
	RF4B	-	-	-	-	-	-	-	9	9	9
VA-QM	EA6A1B	-	-	-	-	-	-	-	9	9	9
VW-M	E-2A	-	-	-	-	-	-	-	9	9	9
VG	KC-130F	-	-	-	-	-	-	18	18	18	18
H-H	CH-37C	-/24	9/24	21/24	21/24	21/24	24	24	5	-	-
	CH-53A	-	-	-	-	-	-	-	19	24	24
H-M	UH-34D	10/120	10/120	18/120	44/120	55/120	120	72	24	-	-
	CH-19E	21/-	58/-	41/-	-	-	-	-	-	-	-
	CH-46A	-	-	-	-	-	-	48	96	120	120
H-L	OH-43D	24/24	24/24	24/12	24/12	24/-	-	-	-	-	-
	UH-1E	-	-	-/12	-/12	-/12	12	12	12	12	12
VU-L	OV-10A	-	-	-	-	-/18	18	18	18	18	18
VR-H	C-54	2/2	2/2	2/2	2/2	2/2	2	-	-	-	-
VR-M	C-119F	15/15	15/15	15/15	15/15	15/15	15	-	-	-	-
	C-130	-	-	-	-	-	-	7	7	7	7
	C-117D	6/6	6/6	6/6	6/6	6/6	6	-	-	-	-
VTBJ	T1A	12/12	12/12	12/12	12/12	12/12	-	-	-	-	-
VTAJ	TA-4E	-	-	-	-	-	12	12	12	12	12

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 Appendix 11 to  
 Chapter V Part II

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## PART II

## CHAPTER VI

AVIATION INSTALLATIONS600. PURPOSE

1. To obtain and maintain adequate facilities so as to provide the scope and degree of service necessary to carry out the assigned missions of individual Marine Corps aviation installations in support of the Aviation Force Structure. This support is provided through:

- a. Seven Marine Corps Air Stations (MCAS)
- b. Three Marine Corps Air Facilities (MCAF).

601. OBJECTIVES1. General

a. Implement and maintain an effective "command" structure that is responsive to the requirements of the Fleet Marine Forces and Shore Activities Facility support needs.

b. Maximum effort will be directed toward obtaining the following types of facilities which are tabulated in order of importance:

(1) New or expanded projects in direct support of the operational requirements of the Marine Corps Division/Wing Teams and Fleet Marine Forces (-Div/Wing Teams).

(2) New or expanded projects in direct support of operational and professional training requirements of the Marine Corps Division/Wing Teams and Fleet Marine Forces (-Div/Wing Teams).

(3) New or expanded projects required in indirect support of Marine Corps Division/Wing Teams and Fleet Marine Forces (-Div/Wing Teams). A balanced program of operational and personnel support facilities will be sought.

(4) Modernization of and replacement projects for any of the foregoing.

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2. Specific

- a. To obtain facilities or construction of suitable and adequate facilities for maintaining and operating a Composite Marine Aircraft Group at Kadena AB, Okinawa.
- b. To obtain or construct suitable and adequate facilities for a Marine Wing Headquarters Group on Okinawa.
- c. To obtain or construct suitable and adequate facilities to support consolidation of the remainder of Japan-based Marine Aircraft Wing Units on Okinawa and/or other strategic sites.
- d. To obtain construction of facilities required to support the introduction of the F-4, A-6, E-2A and A-7 weapons systems at MCAS Cherry Point, Beaufort, El Toro, Kaneohe Bay, Iwakuni and Kadena AB.
- e. To obtain construction of additional facilities required to support the planned expansion of the Marine Corps Helicopter and "LARA" program at MCAF New River, Santa Ana, Futema and MCALF Camp Pendleton.
- f. To obtain construction, repair and improvement of personnel support facilities. Emphasis will be placed on updating and providing adequate barracks, BOQ's, subsistence buildings, health, education, religious and recreational facilities.
- g. To determine and promulgate a long range base utilization and development plan for all Marine Corps aviation installations and complexes.
- h. To determine and promulgate facilities planning criteria applicable to all Marine Corps aviation T/O unit support requirements.

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602. AUTHORITY AND RESPONSIBILITIES1. General

a. Department of the Navy General Order No. 5, effective 1 January 1965, assigns and distributes authority and responsibility for the administration of the United States Marine Corps within the Department of the Navy.

b. General Order No. 19, effective 1 January 1965, assigns and distributes authority and responsibility for the exercise of command and support of shore (field) activities.

c. SECNAV INST 5430.73 of 23 December 1964 assigns CMC command responsibilities and Bureau of Naval Weapons primary support responsibilities for Marine Corps aviation shore (field) activities.

2. Specific

a. Command. The exercise of command over a shore (field) activity has as its primary purpose the provision of effective support to the forces of the United States Marine Corps and of the United States Navy. It encompasses overall authority, direction, control and coordination necessary to carry out the assigned mission and responsibility for the operating efficiency of the activity. It includes authority and responsibility for mission planning, shore activity planning, and workload planning. It also includes authority and responsibility for coordinating the application of the various elements of support. The Commandant of the Marine Corps exercises command over all Marine Corps aviation installations. He will plan for and determine the support needed for equipment, weapons or weapon systems, materials, supplies, facilities, maintenance and supporting services.

b. Command Line. The Commandant of the Marine Corps exercises command of Marine Corps Aviation Shore (Field) Activities through the following command lines:

(1) Commander Marine Corps Air Bases, Eastern Area (COMCABEAST)

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for: MCAS Cherry Point, North Carolina  
MCAS Beaufort, South Carolina  
MCAF New River, North Carolina

(2) Commander Marine Corps Air Bases, Western Area  
(COMCABWEST)

for: MCAS El Toro, California  
MCAS Yuma, Arizona  
MCAF Santa Ana, California

(3) Commander Marine Corps Bases, Pacific (COMCBPAC)

for: MCAS Iwakuni, Japan  
MCAS Kaneohe Bay, Hawaii  
MCAF Futema, Okinawa  
MCAF Kadena, Okinawa  
Other as established

(4) Commandant, Marine Corps Schools (CMCS)

for: MCAS Quantico, Virginia

Command Organization Chart for aviation installations is contained in Appendix (1).

c. Support. Support is the collective term given to the responsibility assigned to an official of the Department of the Navy to provide resources to a command or activity of the Navy or Marine Corps to enable it to carry out its mission. It serves to complement the exercise of command. It includes administrative, personnel and material support; guidance and assistance in, and evaluation of, such matters as organization, procedures, budgeting, accounting, staffing; and the utilization of personnel, funds, material and facilities. In addition, support includes the responsibility to assist command in evaluating the operating efficiency of activities. The Bureau of Naval Weapons exercises primary support responsibility for all Marine Corps aviation installations for the Chief of Naval Material. Funding support is provided by the appropriation: Military Construction, Navy. The Bureau of Naval Weapons is the appropriations sponsor for Marine Corps aviation military construction line items.

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603. AVIATION INSTALLATIONS REQUIREMENTS FY 1965-19751. Peacetime Force Structure and Force Levelsa. East Coast

(1) MCAS Cherry Point--will continue to be the principal Marine Corps All-Weather Master Jet Station on the East Coast. Classified a Major Fleet and Industrial Support Base for activities/units as assigned by CNO and/or CMC, as appropriate. It will support:

Commander Marine Corps Air Bases, Eastern Area

A Depot Maintenance Overhaul and Repair Facility

Marine Training Squadron-1

Marine Station Operation and Engineering Squadron

Marine Air Weapons Training Unit, Atlantic

2d Marine Aircraft Wing--major units include:

1 Marine Wing Headquarters Group

1 Marine Wing Service Group with 1 Marine Aerial Refueler and Transport Squadron

1 Marine Composite Reconnaissance Squadron

1 Marine Airborne Early Warning Squadron (when activated)

1 Light Antiaircraft Missile Battalion

2 Marine Aircraft Groups (VF/VA).

(2) MCAS Beaufort--is classified a Fleet Support Base for activities/units as assigned by CNO and/or CMC, as appropriate. It will support:

2 Marine Aircraft Groups (VF/VA) of the 2d MAW.

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(3) MCAS Quantico--will continue to support the aviation requirements of Marine Corps Schools, Quantico and operations of activities and units designated by CMC. It will support:

- 1 Marine Station Operations and Engineering Squadron  
Marine Helicopter Squadron-1.

(4) MCAF New River--is classified a Fleet Support Base for activities/units as assigned by CNO and/or CMC, as appropriate. It will continue to be the primary Marine Corps East Coast Helicopter Base, supporting:

- 1 Marine Aircraft Group (Helicopter) of the 2d MAW.

(5) MCALF Boque--will support the training requirements of the 2d MAW and continue to be the primary Marine Corps East Coast SATS and FMLP (Day and Night) training site.

(6) NAS Norfolk--provides base facilities for the Headquarters, Fleet Marine Force, Atlantic, Flight Section.

(7) NAF Andrews--provides base facilities for the Headquarters, Marine Corps, Flight Section.

b. West Coast

(1) MCAS El Toro--will continue to be the principal Marine Corps All-Weather Master Jet Station on the West Coast. Classified a Major Fleet Support Base for activities/units as assigned by CNO and/or CMC, as appropriate. It will support:

Commander Marine Corps Air Bases, Western Area

Marine Training Squadron-2

Station Operations and Engineering Squadron

Marine Air Weapons Training Unit, Pacific

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3d Marine Aircraft Wing--major units include:

- 1 Marine Wing Headquarters Group
- 1 Marine Wing Service Group with 1 Marine Aerial Refueler and Transport Squadron
- 1 Marine Composite Reconnaissance Squadron
- 1 Marine Airborne Early Warning Squadron (when activated)
- 2 Marine Aircraft Groups (VF/VA).

(2) MCAS Yuma--is classified as a Fleet Training and Support Base for activities/units as assigned by CNO and/or CMC. Supports weapons training requirements of FMFPac and NAVAIRPAC. Alternate site for 1st MAW and 4th MAW units.

(3) MCAF Santa Ana--is classified as a Fleet Support Base for activities/units as assigned by CNO and/or CMC as appropriate. It will continue to be the primary Marine Corps West Coast Helicopter Base supporting:

- 1 Marine Aircraft Group (Helicopter) of the 3d MAW.

(4) MCALF Camp Pendleton--will continue to support:

- 1 Marine Observation Squadron of the 3d MAW.

c. Overseas Bases

(1) MCAS Kaneohe Bay (Oahu, Hawaii)--is classified a Strategic Fleet Support Base for activities/units as assigned by CNO and/or CMC. It will support:

1st Marine Brigade--major units include:

- 1 Marine Aircraft Group (VF/VA/H)
- 1 Marine Infantry Regiment (Reinf)

Headquarters, Fleet Marine Force, Pacific, Flight Section.

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(2) MCAS Iwakuni (Japan)--will continue to be the principal Marine Corps Air Base in the Far East until MAW units deployed elsewhere. Classified as a Strategic Fleet Support Base supporting the following units of the 1st MAW:

- 1 Marine Wing Headquarters Group
- 1 Marine Wing Service Group with 1 Marine Aerial Refueler and Transport Squadron
- 1 Marine Composite Reconnaissance Squadron
- 1 Marine Airborne Early Warning Squadron (when activated)
- 1 Marine Aircraft Group (VF/VA).

(3) MCAF Kadena (Okinawa)--will support the major elements of one Marine Aircraft Group (VF/VA) of the 1st MAW when the units are permanently deployed from MCAS Iwakuni. Time frame of move is planned for 1 January 1968 - 1 January 1969; however, a policy of earlier incremented moves will be supported at all command echelons.

(4) MCAF Futenma (Okinawa)--is classified as a Strategic Fleet Support Helicopter Base for activities/units as assigned by CNO. It will continue to be the primary Marine Corps Far East Helicopter Facility supporting:

- 1 Marine Aircraft Group (Helicopter) of the 1st MAW.

(5) NAS Atsugi (Japan)--will continue to support one Marine Aircraft Group of the 1st MAW until the Group is permanently deployed to MCAS Iwakuni. Time frame of move is planned for 1 January 1968 - 1 January 1969; however, a policy of earlier incremented moves will be supported at all command echelons.

## 2. General Mobilization Force Structure and Force Levels

a. CONUS. No new major installations or significant changes in logistic missions are planned to support that portion of MCP affecting Marine Corps aviation installations. Current JCS Joint Air Base Utilization Plan (JABUP FY\_\_\_\_) contains listing of Post M-Day installation requirements.

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b. Overseas. Normal installations planning will be based upon one airfield supporting each deployed Marine Aircraft Group. Current JCS United States Base Rights Overseas (USBRO) contains listing of Post M-Day installations requirements.

3. Summary. Appendix (2) is a summary display of the aviation installations programmed for FY 1965-1975.

604. MILITARY CONSTRUCTION REQUIREMENTS FY 1965-1975

1. General

a. The authorized military construction program requirements of Marine Corps aviation are contained in the Navy Department Five-Year Force Structure and Financial Program.

b. The authorized and projected military construction requirements of Marine Corps aviation are contained in the current Department of the Navy Military Construction Program Objectives Fiscal Years 1967-1971 (MILCON PO FY-67) and Appendixes (2), (4) and (5) to this Chapter.

2. Peacetime Force Structure and Force Levels

a. Marine Corps Division/Wing Teams. Appendixes (3) and (4) present the military construction line items at aviation installations programmed in support of DOD Program Elements; Marine Corps Air Stations and Air Facilities, Element Number 3 28 41 013; and Headquarters and Command Support, Element Number 7 06 12 013, for each year of the period.

b. Organized Reserve Air. The facilities established to support Marine Corps Air Reserve training are numerically adequate for the planned size of the program. However, certain refinement and modernization of operational facilities will be required commensurate with the phasing-in of new hardware for selected aviation reserve units. Marine Air Reserve units are provided aviation facilities support by designated Naval Air Stations. Funding support for military construction line items is provided by the appropriation: Military Construction, Naval Reserve Forces, and Military Construction, Navy. Appendix (2) to Part 2, Chapter 3 is a listing of aircraft and personnel requirements/objectives on which total support capacity will be planned. Current MCP-(FY) contains specific installation base loading data.

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c. Advanced Bases. The determination of specific sites for establishment of bases, within the general locations described in the Navy Objectives Plan - FY (NOP-FY) and the United States Base Requirements Overseas (USBRO), will be made by the appropriate fleet commander-in-chief. The construction forces associated with the development of advanced bases are the Navy Mobile Construction Battalions (P1/P25 functional components). The availability of construction forces and material will determine the construction schedule for base development.

d. Family Housing. Appendix (4) presents the family housing program for the period.

3. General Mobilization Force Structure and Force Levels. The facilities construction required to support that portion of MCP (U) affecting Marine Corps installations will be provided by maximum utilization of existing facilities, in some cases under "crowded conditions," and the provision of minimum military construction subsequent to M-Day, based on the following methods of determination:

a. To obtain permanent construction, based on, but not in excess of, M-Day station loads for the regular establishment, and based on pre-M-Day station loads for the reserve establishment.

b. To erect emergency type projects in accordance with current directives where and when station loads exceed planned M-Day strength for a period of less than nine months.

c. To erect temporary construction where and when station loads exceed planned M-Day strength for a period in excess of nine months.

4. Basis for Military Construction Planning and Programming. Weapon system, personnel, units and location form the basis of all MCON planning and programming. The basic reference documents to be used in MCON planning and programming for aviation installations is the latest updating of OPNAV NOTICE 003110, Projected Aviation Plans Summary (PAPS). Appendix (4) to Part II, Chapter 1 and Appendix (1) to Part II, Chapter 3 present detailed breakout of base loading involving Marine Corps aircraft, units and personnel.

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5. Military Construction Planning and Programming

a. Appropriated fund military construction will be in accordance with OPNAV INST 11010.1E.

b. Nonappropriated fund military construction will be in accordance with MCO 11013.70.

605. OPERATIONS AND MAINTENANCE FY 1965-1975

1. General. Major support of Operations and Maintenance at Marine Corps aviation installations is financed by the appropriation: Operations and Maintenance, Navy. Funds provided under this appropriation are administered by the Navy Material Support Establishment (NMSE). The appropriation: Operations and Maintenance, Marine Corps, finances the support of rifle ranges, sales commissaries, laundry functions, recreation supplies and equipment, and other supplies and equipment peculiar to the Marine Corps.

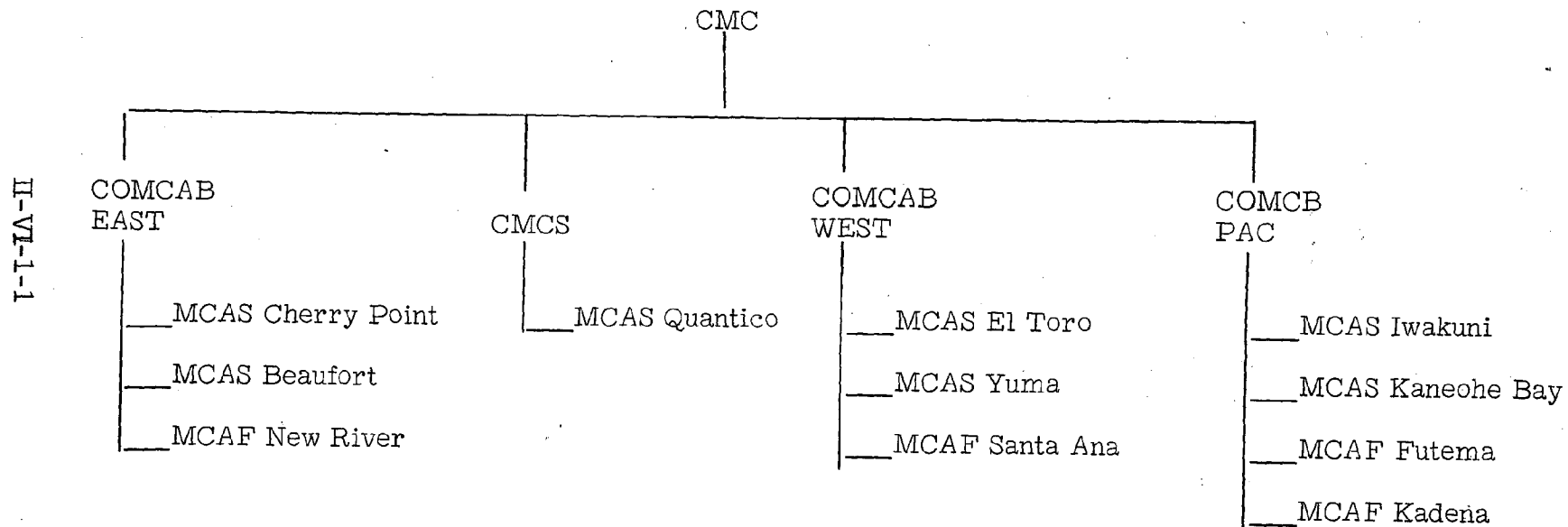
2. Housing. Housing at Marine Corps aviation installations is under the operation and maintenance control of the Bureau of Yards and Docks. Funds for Operations and Maintenance of family housing are provided from the appropriation: Operations and Maintenance, Navy.

3. Repair and Improvement (Facilities Projects Program). Major support of repair and improvement functions at Marine Corps aviation installations is financed by the appropriation: Operations and Maintenance, Navy. These funds are administered by the Bureau of Yards and Docks.

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COMMAND ORGANIZATION CHART FOR AVIATION INSTALLATIONS

APPENDIX (1) TO  
CHAPTER VI, PART II  
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SUMMARY DISPLAY OF INSTALLATIONS PROGRAMMED FOR FY 1965-1975

DOD Program Elements and Numbers	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
-------------------------------------	------	------	------	------	------	------	------	------	------	------	------

1. Marine Corps Air Stations and Facilities - Program Element No. 3 28 41 013

MCAS Beaufort	X	X	X	X	X	X	X	X	X	X	X
MCAS Cherry Point	X	X	X	X	X	X	X	X	X	X	X
MCAS El Toro	X	X	X	X	X	X	X	X	X	X	X
MCAS Iwakuni	X	X	X	X	X	X	X	X	X	X	X
MCAS Kaneohe Bay	X	X	X	X	X	X	X	X	X	X	X
MCAS Yuma	X	X	X	X	X	X	X	X	X	X	X
MCAF Futema	X	X	X	X	X	X	X	X	X	X	X
MCAF Kadena					X	X	X	X	X	X	X
MCAF New River	X	X	X	X	X	X	X	X	X	X	X
MCAF Santa Ana	X	X	X	X	X	X	X	X	X	X	X
MCALF Bogue	X	X	X	X	X	X	X	X	X	X	X
MCALF Camp Pendleton	X	X	X	X	X	X	X	X	X	X	X
NAS Atsugi	X	X	X	X	X						

2. Headquarters and Command Support - Program Element No. 7 06 12 013

MCAS Quantico	X	X	X	X	X	X	X	X	X	X	X
---------------	---	---	---	---	---	---	---	---	---	---	---

3. In addition to the above installations, Headquarters, Marine Corps Flight Section will utilize facilities at NAF Andrews and Headquarters, Fleet Marine Force, Atlantic Flight Section will utilize facilities at NAS Norfolk during this period.

APPENDIX (2) TO  
CHAPTER VI, PART II

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DOD PROGRAM ELEMENT  
MARINE CORPS AIR STATIONS and FACILITIES  
ELEMENT NO. 32841013

FY 1965

<u>Prio.</u>	<u>Station</u>	<u>Proj.</u>	<u>Line Item</u>	<u>Cost (\$000)</u>
*	Beaufort	P-800	Runway Centerline Lighting	121
*	Beaufort	P-140	Aircraft Power Check Fac.	31
*	Cherry Point	P-494	Aircraft Maint. Shops	1,500
*	Cherry Point	P-544	Combat Equip. Maint. Shop (MACS)	61
*	Cherry Point	P-593	HAWK (LAAM Bn) Facilities	
		P-591		
		P-590		
		P-589		
		P-594		829
*	Cherry Point	P-578	Aircraft Systems Trng. Bldg.	224
*	El Toro	P-044	Runway End Zone	338
* @	El Toro	P-800	Runway Centerline Lighting	120
*	El Toro	P-140	A/C Systems Trng. Bldg. (RF-4B)	88
*	El Toro	P-113	A/C Maint. Hangars (2d Incr.)	1,200
*	Kaneohe Bay	P-015	Runway Improvements	344
*	New River	P-064	A/C Systems Trng. Bldg. (CH-53A)	326
*	Santa Ana	P-028	Jet Fuel Facilities	103
*	Santa Ana	P-005	A/C Ops. Bldg. & Control Tower	235
* #	Santa Ana	P-006	Squadron Ops. Bldg. (MACS)	263
*	Santa Ana	P-530	A/C Systems Trng. Bldg. (CH-53A)	705
*	Santa Ana	P-008	Combat Vehicle Maint. Shop	108
*	Yuma	P-008	A/C Parking Apron (2d Incr.)	808
*	Yuma	P-006	Aircraft Maint. Hangars	1,000
*	Iwakuni	P-269	Aircraft Parking Apron	244
* #	Iwakuni	P-358	Aircraft Fuel Storage Tanks	339
*	Iwakuni	P-401	Airfield Lighting (Approach & Center-line)	328
*	Iwakuni	P-998	Aircraft Maint. Hangar	229
*	Iwakuni	P-406	A/C Truck Fueling Facility	65
*	Iwakuni	P-400	Receiver Building	129

APPENDIX (3) TO  
CHAPTER VI, PART II  
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FY 1965 (Con't)

<u>Prio.</u>	<u>Station</u>	<u>Proj.</u>	<u>Line Item</u>	<u>Cost (\$000)</u>
*	Futema	P-005	Instruction Building	202
*	Futema	P-030	Dental Clinic	76
Emergent	Iwakuni	P-418	LST Ramp Modification	108.5

\* Not in priority since the program has been approved and funded by Congress.

@ Project cancelled.

# Project deferred to provide funds for contingency projects. FY 1966 Congressional authorization and appropriation requested.

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DOD PROGRAM ELEMENT  
MARINE CORPS AIR STATIONS and FACILITIES  
ELEMENT NO. 32841013

FY 1966

<u>Prio.</u>	<u>Station</u>	<u>Proj.</u>	<u>Line Item</u>	<u>Cost (\$000)</u>
1	Beaufort	P-700	A/C Systems Trng. Bldg. (A7-A)	962
2	Camp Pendleton	P-099	A/C Systems Trng. Bldg. (UH-1E)	150
3	Kadena	P-002	Taxiway	465
4	Cherry Point	P-569 (Rev.)	Barracks Rehab.	3,590
5	Kadena	P-001	Parking Apron	1,600
6	Beaufort	P-178	A/C Maintenance Hangar	806
7	Kadena	P-003	A/C Wash Rack	37
8	Beaufort	P-180	Elect. Distribution System	221
9	Kadena	P-004	A/C Maintenance Hangars	4,298
10	Cherry Point	P-053	Reconnaissance Photo Bldg.	485
11	Kadena	P-005	Roads and Utilities	400
12	El Toro	P-024	Water Distribution System	331
13	Yuma	P-003	Road to Target Area	96
14	Cherry Point	P-592	Combat Vehicle Maint. Shop	111
15	New River	P-201	E. M. Barracks (116 Man)	240
16	Santa Ana	P-301	E. M. Barracks (180 Man)	366
17	Santa Ana	P-026	A/C Line Buildings	161
18	New River	P-013	Dispensary	243
19	Futema	P-999	Fuel Storage	75
20	Santa Ana	P-040	A/C Parking Apron	809
21	Yuma	P-009	A/C Operations Bldg.	300
22	Futema	P-996	Roads and Utilities	74
23	Futema	P-026	Vehicle Maint. Bldg.	169
24	Beaufort	P-148	A/C Direct Fueling Stations	784
25	Camp Pendleton	P-005	A/C Direct Fueling Station	264
26	Futema	P-022	Public Works Shop	219

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FY 1966 (Con't)

<u>Prio.</u>	<u>Station</u>	<u>Proj.</u>	<u>Line Item</u>	<u>Cost (\$000)</u>
27	Futema	P-011	Storage Buildings	236
28	New River	P-039	Airfield Lighting	249
29	Santa Ana	P-041	Aircraft Wash Rack	92
30	Iwakuni	P-411	Barracks (765 Man Rehab.)	300
31	New River	P-030	A/C Maint. Hangar (MAG)	1,778
32	Yuma	P-010	Sqdn. Supply & Maint. Fac.	223
33	Santa Ana	P-050	A/C Direct Fueling Stations (1st Incr.)	792
34	New River	P-029	A/C Fire & Crash Station	77
35	Cherry Point	P-543	MACS Warehouse	166
36	Futema	P-431	Barracks (360 Man)	726
37	Cherry Point	P-529	A/C Fire & Crash Station	328
38	El Toro	P-123	Guided Missile Magazine	42
39	El Toro	P-801	Airfield Lighting	286
40	Beaufort	P-168	Roads & Parking Area (1st Incr.)	193
41	El Toro	P-121	Survival Equip. Shop	222
42	Cherry Point	P-535	Sqdn. Operations Bldg.	371
Emergent	Iwakuni	P-421	Barracks (Restoration Fire-damaged Facilities)	1,257
Emergent	Iwakuni	P-422	RF-4B Support Facilities	189
Emergent	Iwakuni	P-347	Electrical Improvements	170
Emergent	Santa Ana	C1-64	Jet Engine Repair, Maint. & Test Cell Fac.	171

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SECRET

SECRET

DOD PROGRAM ELEMENT  
MARINE CORPS AIR STATIONS and FACILITIES  
ELEMENT NO. 32841013

FY 1967

<u>Prio.</u>	<u>Station</u>	<u>Proj.</u>	<u>Line Item</u>	<u>Cost (\$000)</u>
1	Kadena	P-006	Jet Fuel Storage Tank	158
1	Kadena	P-007	Communications Lines	171
1	Kadena	P-008	Training Building	98
1	Kadena	P-009	Combat Training Tank	140
1	Kadena	P-010	Guided Missile Facility	263
1	Kadena	P-011	Auto Vehicle Maint. Fac.	263
1	Kadena	P-012	Parachute Shop	197
1	Kadena	P-013	Ground Support Maint. Shop	141
1	Kadena	P-014	Maintenance Shop (MABS)	110
1	Kadena	P-015	Ammunition Storage (Conv.)	166
1	Kadena	P-016	Multi-plate Cubicle (Spec. Weps)	114
1	Kadena	P-017	General Warehouse	883
1	Kadena	P-018	Administration Building	247
1	Kadena	P-019	Dispensary/Dental Clinic	168
1	Kadena	P-020	E. M. Barracks	2,343
1	Kadena	P-021	Subsistence Building	468
1	Kadena	P-022	BOQ w/o Mess	1,360
1	Kadena	P-023	Chapel	211
1	Kadena	P-024	Hobby Shop	33
1	Kadena	P-025	Gymnasium	187
1	Kadena	P-026	Theatre	199
1	Kadena	P-027	Enlisted Men's Service Club	167
2	Kaneohe Bay	P-003	Sqdn. Ops & Maint. Fac. (MACS)	344
3	Santa Ana	P-011	Combat Equip. Maint. Fac.	294
4	El Toro	P-038	Simulated Carrier Deck Lighting	872
5	Cherry Point	P-596	BOQ Alterations	1,040
6	New River	P-031	Expand Heating Plant	88
7	Kaneohe Bay	P-016	1st Radio Bn. Facility	932

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FY 1967 (Con't)

<u>Prio.</u>	<u>Station</u>	<u>Proj.</u>	<u>Line Item</u>	<u>Cost (\$000)</u>
8	Yuma	P-015	Structural Fire & Crash Station	328
9	Yuma	P-018	Recreation Building	530
10	Santa Ana	P-012	Subsistence Building	720
11	Beaufort	P-028	Security Building	45
12	El Toro	P-132	A/C Maint. Shop Addition	417
13	Beaufort	P-144	Air Terminal Building	33
14	Beaufort	P-067	Auto Vehicle Maint. Fac.	173
15	Cherry Point	P-547	Logistics Support Building	149
16	Cherry Point	P-553	Marine Air Wpns Trng Unit Bldg	213
17	El Toro	P-023	Hospital Addition	750
18	New River	P-044	E. M. Barracks (252 Man)	527
19	New River	P-032	Airfield Operations Building	214
20	El Toro	P-127	Communications Center	266
21	Yuma	P-020	Station Hospital	310
22	Santa Ana	P-066	A/C Parking Apron (2d Incr.)	373
23	New River	P-034	BOQ (50 Man)	528
24	Yuma	P-023	Chapel	399
25	Yuma	P-063	Emergency Arresting Gear	107
26	Beaufort	P	Emergency Arresting Gear	80
27	Iwakuni	P-342	BOQ	597
28	Cherry Point		Emergency Arresting Gear	80
29	El Toro	P-802	Emergency Arresting Gear	80
30	Kaneohe Bay		Emergency Arresting Gear	107
31	Iwakuni		Emergency Arresting Gear	214
*	Camp Butler/ Hansen		Auto Vehicle Maint. Fac. (MACS)	105
*	Camp Butler/ Hansen		Storage Building (MACS)	81
*	Camp Butler/ Hansen		Administration Building	227

\* Marine Corps sponsorship

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DOD PROGRAM ELEMENT  
MARINE CORPS AIR STATIONS and FACILITIES  
ELEMENT NO. 32841013

FY 1968

<u>Prio.</u>	<u>Station</u>	<u>Proj.</u>	<u>Line Item</u>	<u>Cost (\$000)</u>
1	El Toro	P-207	A/C Systems Trng Bldg (A-7A)	52
2	New River	P-019	A/C Parking Apron	2,252
3	El Toro	P-116	A/C Maint. Hangar (Area II)	2,493
4	Cherry Point	P-583	Water Systems Expansion	692
5	Kaneohe Bay	P-014	Runway Improvements	394
6	Santa Ana	P-045	A/C Fire & Crash Station	92
7	Camp Pendleton	P-008	Combat Vehicle Maint. Shop	53
8	Futema	P-040	Cold Storage Warehouse	70
9	Futema	P-012	BOQ (66 Man)	402
10	Beaufort	P-136	Guided Missile Facility	373
11	Cherry Point	P-434	Mess Hall	1,214
12	Santa Ana	P-067	A/C Direct Fuel System	276
13	Yuma	P-036	Compass Calibration Pad	77
14	Beaufort	P-189	Jet Engine Sound Suppressor	210
15	Iwakuni	P-416	A/C Maint. Hangar Improvement	328
16	Iwakuni	P-417	A/C Maint. Hangar Addition	199
17	Iwakuni	P-419	Auto Vehicle Maint. Fac.	1,468
18	Iwakuni	P-230	Cold Storage Warehouse	130
19	Santa Ana	P-007	MACS Warehouse	142
20	Santa Ana	P-042	E. M. Barracks (504 Man)	982
21	Cherry Point	P-556	MWHG Combat Equip. Maint. Shop	262
22	El Toro	P-026	Turbo-jet Engine Test Cells	330
23	Santa Ana	P-046	BOQ with Mess (124 Man)	1,028
24	New River	P-038	A/C Maint. Hangar (MCAF)	665
25	Beaufort	P-186	Barracks	514
26	Kadena	P-028	Bowling Alley (Addition)	145
27	Kadena	P-029	Officers Club (Addition)	140
28	Kadena	P-030	NCO Club (Addition)	82
29	Kadena	P-031	Library	52
30	Kadena	P-032	Education Center	94
31	Kadena	P-033	Playing Courts	52

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DOD PROGRAM ELEMENT  
MARINE CORPS AIR STATIONS and FACILITIES  
ELEMENT NO. 32841013

FY 1969

<u>Prio.</u>	<u>Station</u>	<u>Proj.</u>	<u>Line Item</u>	<u>Cost (\$000)</u>
1	Yuma	P-035	400 Cycle Power	149
2	New River	P-024	Combat Veh. Maint. Facility	149
3	Cherry Point	P-026	MWHG Com-Elec. Facility	199
4	Beaufort	P-163	Chapel Addition	218
5	Futema	P-995	Air Condition E. M. Mess	86
6	Iwakuni	P-413	Barracks (830 Man)	1,450
7	Kaneohe Bay	P-020	Modernization of E. M. Barracks	636
8	El Toro	P-086	Combat Veh. Maint. Fac.	164
9	Beaufort	P-187	A/C Arm-Dearm Pads	245
10	Kaneohe Bay	P-017	Underground Prim. Elect. Dist. Sys.	99
11	El Toro	P-014	Aircraft Parking Apron	243
12	Cherry Point	P-023	MWHG Admin/Ops Bldg.	282
13	Cherry Point	P-534	MWHG Tact. Air Con. Center	118
14	Yuma	P-044	Barracks (116 Man)	265
15	Beaufort	P-188	Fire & Crash Station	70
16	Cherry Point	P-542	A/C Parking Apron (O&R)	410
17	Yuma	P-027	General Warehouse	372
18	El Toro	P-012	Barracks for 1,008 E. M. (3d Incr.)	1,652
19	Cherry Point	P-025	MWHG Warehouse	222
20	New River	P-033	Refueler Parking	76
21	Beaufort	P-153	Ordnance Facilities (2d Incr.)	237
22	Cherry Point	P-548	Survival Equip. Facility	357
23	Cherry Point	P-430	O&R Engine Preserv. Bldg.	583
24	Cherry Point	P-499	MAG 14 (MABS) Facility	212
25	Cherry Point	P-597	E. W. Barracks Rehab. (125 Wm)	181
26	Yuma	P-033	Photographic Building	129
27	El Toro	P-031	Air Passenger/Freight Terminal	265
28	Yuma	P-028	Administration Building	364

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FY 1969 (Con't)

<u>Prio.</u>	<u>Station</u>	<u>Proj.</u>	<u>Line Item</u>	<u>Cost (\$000)</u>
29	Futema	P-037	A/C Parking Apron	289
30	Camp Pendleton	P-007	Airfield Lighting	335
31	El Toro	P-039	Direct Fueling Stations	1,778
32	Beaufort	P-185	Marine Exchange Annex	147
33	Futema	P-017	Photographic Building	41
34	Beaufort	P-015	Photographic Building	145
35	El Toro	P-124	Hangar Door Mod. for KC-130	36
36	Santa Ana	P-044	Aviation Warehouse	644
37	Futema	P-039	MASS Facility	462
38	Cherry Point	P-078	MWSG Combat Equip. Maint. Fac	120
39	Cherry Point	P-541	Sta. Opers. Bldg Improvement	398
40	Futema	P-027	Public Works Warehouse	70
41	New River	P-015	Security Building	79
42	New River	P-035	JP-5 Fuel Storage	56
43	Cherry Point	P-034	Supply Dept. Warehouse Extension	733
45	Beaufort	P-182	Roads & Streets (2d Incr.)	159

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SECRET

DOD PROGRAM ELEMENT  
MARINE CORPS AIR STATIONS and FACILITIES  
ELEMENT NO. 32841013

FY 1970

<u>Prio.</u>	<u>Station</u>	<u>Proj.</u>	<u>Line Item</u>	<u>Cost (\$000)</u>
1	Kaneohe Bay	P-070	A/C System Trng Bldg (A-7A)	52
2	Beaufort	P-181	Crash Strips R/W 4-32-4	97
3	Cherry Point	P-504	MAG 24 (MABS) Facility	212
4	Futema	P-003	Airfield Lighting	228
6	Cherry Point	P-441	O&R Plant Maint. Shop Extension	359
7	Futema	P-025	Armory	28
8	El Toro	P-119	Guest House	442
9	New River	P-016	Chapel Extension	350
10	El Toro	P-035	Commissary	903
11	Futema	P-998	Air Condition Admin Area	42
12	Santa Ana	P-061	Dental Clinic	225
13	Santa Ana	P-062	Dispensary	392
14	El Toro	P-032	E. M. Barracks	1,652
15	Beaufort	P-190	Barracks (1,264 Man)	696
16	Beaufort	P-191	Barracks (1,008 Man)	357
17	Futema	P-029	Barracks (204 Man)	440
18	Beaufort	P-192	Barracks (86 Man)	29
19	Cherry Point	P-521	Tac. Support Fac. (MARTSAT)	200
20	Santa Ana	P-043	Admin Bldg. (MAG)	440
21	Futema	P-044	Mess Hall Addition	51
22	El Toro	P-040	Convert to Natural Gas	1,563
23	Cherry Point	P-587	O&R Jet Engine Test Cells	1,572
24	Yuma	P-061	A/C Parking Apron (2d Incr.)	387
25	Cherry Point	P-437	O&R Shop	71
26	Yuma	P-029	P. W. Maint. Bldg.	375

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SECRET

FY 1970 (Con't)

<u>Prio.</u>	<u>Station</u>	<u>Proj.</u>	<u>Line Item</u>	<u>Cost (\$000)</u>
27	Futema	P-028	Hobby Shop	58
28	Yuma	P-016	Fire Protection	323
29	Cherry Point	P-555	MABS Fac. (MWSG)	234
30	Cherry Point	P-458	MWSG Warehouse	684
31	Yuma	P-037	A/C Boresight Range	40
32	Camp Pendleton	P-009	Automotive Veh. Compound	91
33	Yuma	P-038	A/C Power Check Fac.	58
34	New River	P-036	Staff NCO Club	360
35	New River	P-037	Officers' Mess Expansion	215

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SECRET

SECRET

DOD PROGRAM ELEMENT  
MARINE CORPS AIR STATIONS and FACILITIES  
ELEMENT NO. 32841013

FY 1971

<u>Prio.</u>	<u>Station</u>	<u>Proj.</u>	<u>Line Item</u>	<u>Cost (\$000)</u>
1	New River	P-042	E. M. Service Club Expansion	108
2	Kaneohe Bay	P-024	Rehabilitate BOQ	202
3	Iwakuni	P-289	Bomb-Rocket Range	165
4	Cherry Point	P-584	Pollution Abat. Plant Addition	80
5	Cherry Point	P-440	Auto Veh. Maint. Addition	548
6	Beaufort	P-193	Subsistence Building	105
7	Futema	P-015	Officers' Swimming Pool	139
8	El Toro	P-122	Avigation Obstr. Removal (Hill 733)	2,450
9	Cherry Point	P-585	Supply Dept. Warehouse	1,584
10	Kaneohe Bay	P-022	Rehab. Subsistence Building	99
11	Beaufort	P-194	BOQ	153
12	Futema	P-043	NCO Club Addition	52
13	New River	P-042	P. W. Paint Shop	157
14	New River	P-026	Commissary	345
15	Beaufort	P-195	Chapel Air Conditioning	30
16	Futema	P-016	Bowling Alley	209
17	El Toro	P-144	Admin. & Whse Bldg. (MWSG)	1,019
18	Cherry Point	P-562	Post Office	195
19	Cherry Point	P-429	E. M. Service Club	662
20	New River	P-021	Marine Exchange Expansion	161
21	Futema	P-042	Chapel Annex	68
22	El Toro	P-016	Blast Protection Pavements	294
23	Cherry Point	P-570	Fire Protection	610
24	Cherry Point	P-568	A/C Maint. Hangar Alterations	200
25	Cherry Point	P-439	Chapel Annex	253

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II-VI-3-12

SECRET

FY 1971 (Con't)

<u>Prio.</u>	<u>Station</u>	<u>Proj.</u>	<u>Line Item</u>	<u>Cost</u> <u>(\$000)</u>
26	Santa Ana	P-052	E. M. Barracks	803
27	Cherry Point	P-552	Road Improvements	105
28	El Toro	P-017	A/C Parking Apron	1,032
29	Cherry Point	P-531	Physiological Training Bldg.	391
30	Santa Ana	P-048	General Warehouse	375
31	Cherry Point	P-533	Communications Center	915
32	El Toro	P-055	Subsistence Building	272

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II-VI-3-13

SECRET

DOD PROGRAM ELEMENT  
MARINE CORPS AIR STATIONS and FACILITIES  
ELEMENT NO. 32841013

FY 1972 - FY 1975

The time-phasing of line items for this period cannot be forecast with a degree of accuracy sufficient to warrant their assignment to specific fiscal year constructions programs.

Unprogrammed line items for this period are as follows:

<u>Station</u>	<u>Proj.</u>	<u>Line Item</u>	<u>Cost</u> <u>(\$000)</u>
MCAS Cherry Point	P-579	Training Building	526
"	P-563	Warehouse Improvement	115
"	P-443	Industrial Rel Department Building	160
"	P-084	Public Works Admin Building	402
"	P-536	Disbursing Facility	100
"	P-581	M O Office	282
"	P-999	Crash Crew Quarters (Mod)	28
"	P-502	Commissary Building	585
"	P-998	Theatre (Mod)	112
"	P-571	Officers' Club Rehab	117
"	P-997	NCO Club Rehab	60
"	P-996	Library	193
"	P-995	Education Center	415
"	P-540	Electric Gen Plant	60
"	P-431	Pumping Station	375
"	P-538	Road to Highway 70	3,680
"	P-559	Security Fence	136
MCAS Beaufort	P-091	Crash Boat Facility	50
MCAF New River	P-017	Runway Extension	1,400
"	P-018	Taxiways	1,160
"	P-052	Post Office	41
"	P-023	Hobby Shop	64
"	P-999	Gymnasium Rehab	79

SECRET

II-VI-3-14

SECRET

<u>Station</u>	<u>Proj.</u>	<u>Line Item</u>	<u>Cost</u> <u>(\$000)</u>
MCAS El Toro	P-125	A/C Refueler Parking	210
"	P-046	Direct Fueling Stations	317
"	P-063	PW Transportation Fac.	582
"	P-028	Flammable Storehouses (2)	40
"	P-045	Structural Firehouse	74
"	P-068	Gymnasium	600
"	P-033	Subsistence Building	941
"	P-015	Runway End Zones	661
"	P-034	A/C Arm/Dearm Apron	377
"	P-029	Training Building Addition	269
"	P-052	Physiological Trng. Bldg.	395
"	P-022	A/C Systems Trng. Bldg.	887
"	P-052	Nite Trnr plus Rapid Decompress	395
"	P-129	Ordnance Training Building	191
"	P-141	Special Weapons Building	180
"	P-096	A/C Maint. Hangar (SOES)	1,013
"	P-097	A/C Maint. Hangar	602
"	P-098	A/C Maint. Hangar VMT	1,354
"	P-133	Refueler Maint. Fac.	50
"	P-134	Refueler Maint. Fac.	50
"	P-136	Ground Comm Area II	64
"	P-137	Survival Equip Shop Area II	132
"	P-138	MABS Fac Area III	100
"	P-139	MABS Facility Area 2	120
"	P-020	Ready Serv Ammo Lockers (4)	120
"	P-027	Ready Serv Ammo Lockers (2)	60
"	P-058	Ready Serv Ammo Lockers (2)	60
"	P-066	H E Magazines	350
"	P-143	Flammable Storage MWSG	171
"	P-059	Flammable Storehouses (2)	40
"	P-021	Flammable Storehouses (4)	80
"	P-062	Admin Building (MAW)	1,175
"	P-064	Admin Building (AIRFMFPAC)	680
"	P-048	Admin Building MCAS	753

SECRET

II-VI-3-15



SECRET

<u>Station</u>	<u>Proj.</u>	<u>Line Item</u>	<u>Cost</u> <u>(\$000)</u>
MCAS El Toro	P-145	Barracks SNCO	1,197
"	P-053	Barracks (788 Man)	1,164
"	P-501	Barracks Modn	75
"	P-503	Barracks Modn	195
"	P-054	Wave Barracks (113 Wm)	222
"	P-043	BOQ with Mess	2,003
"	P-148	BOQ (W)	118
"	P-079	Chapel w/Ed Wing	337
"	P-149	Hobby Shop	130
"	P-142	Handball Courts	40
"	P-068	Gymnasium w/Pool	703
"	P-042	Com w/Bath House	1,002
"	P-041	EM Club	721
"	P-049	EM Club NCO w/Pool	893
"	P-108	Library w/Ed Wing	614
"	P-151	Play Courts	161
"	P-152	Play Courts	170
"	P-509	Swimming Pool w/House	41
"	P-843	Drain plus Erosion Control	913
MCAF Santa Ana	P-100	Chapel plus Ed Wing	380
"	P-059	Theater	244
"	P-054	Ops. Building MACS	241
"	P-056	Combat Veh. Maint. Shop	80
"	P-055	MACS Warehouse	142
"	P-057	Commissary	133
"	P-101	Hobby Shop	56
"	P-058	Gymnasium	161
"	P-060	Officers' Club	260
"	P-102	EM Club	328
"	P-103	NCO Club	304
"	P-104	Library	95

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II-VI-3-16

SECRET

<u>Station</u>	<u>Proj.</u>	<u>Line Item</u>	<u>Cost (\$000)</u>
MCAF Santa Ana	P-105	Education Center	121
"	P-106	Play Courts Outdoor	64
"	P-107	Playfields plus Facil	108
"	P-024	Outdoor Swimming Pool	246
MCAS Yuma	P-052	Barracks (433 Man)	780
"	P-040	Barracks Modn	149
"	P-041	Barracks Modn	165
"	P-042	Barracks Modn	68
"	P-043	BOQ Modn	88
"	P-045	BOQ (1st Incr.)	316
"	P-046	BOQ (2d Incr.)	315
"	P-047	BOQ (3d Incr.)	306
"	P-034	Brig	193
"	P-051	Com Open	265
"	P-052	EM & NCO Club Modn Addition	47
"	P-053	Library	52
"	P-999	Education Center	51
"	P-054	Play Courts	38
"	P-055	Play Field	43
"	P-999	Play Fields	113
"	P-056	Swimming Pool EM/Bath House	60
"	P-999	Swimming Pool Off/Bath House	72
"	P-057	Swimming Pool NCO/Bath House	119
MCAS Kaneohe Bay	P-030	EM Barracks (2nd Incr.)	1,795
"	P-018	A/C Wash Rack	102
"	P-011	Brigade Comm Fac	466
"	P-012	Gen Instruction Building	324
"	P-003	Rehab Barracks	1,835
"	P-028	Barracks	29

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II-VI-3-17

SECRET

<u>Station</u>	<u>Proj.</u>	<u>Line Item</u>	<u>Cost</u> <u>(\$000)</u>
MCAS Kaneohe Bay	P-023	Subsistence Building	127
"	P-029	Brig	481
"	P-025	Chapel	42
"	P-019	Gymnasium	968
"	P-026	Theater	157
"	P-027	Officers' Club	85
"	P-013	EM Service Club	920
"	P-010	Sewage Treatment Plant	726
"	P-009	Fire Protection	780

SECRET

II-VI-3-18

SECRET

DOD PROGRAM ELEMENT  
HEADQUARTERS and COMMAND SUPPORT  
ELEMENT NO. 70612013

FY 1969

<u>Prio.</u>	<u>Station</u>	<u>Proj.</u>	<u>Line Item</u>	<u>Cost (\$000)</u>
44	Quantico	P-035	A/C Fire & Crash Station	238

FY 1970

5	Quantico	P-100	Barracks Rehab (254 Man)	116
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UNPROGRAMMED

None	Quantico	P-101	Barracks (100 Man)	193
	"	P-032	A/C Maintenance Shop	144

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APPENDIX (4) TO  
CHAPTER VI PART II

II-VI-4-1  
(REVERSE BLANK)

DOD PROGRAM ELEMENT  
FAMILY HOUSING NAVY (MARINE CORPS AVIATION)  
ELEMENT NO. 73906012

<u>Prio.</u>	<u>Station</u>	<u>Line Item</u>	<u>Cost (\$000)</u>
<u>FY 1965</u>			
1.	MCAS Kaneohe Bay	Family Housing (230 units)	4,025
2.	MCAS Yuma	Family Housing (100 units)	1,750
<u>FY 1966</u>			
1.	MCAS Kaneohe Bay	Family Housing (150 units)	2,625
2.	MCAS El Toro/ MCAF Santa Ana	Family Housing (250 units)	4,375
<u>FY 1967</u>			
1.	MCAS Kaneohe Bay	Family Housing (150 units)	2,625
2.	MCAF New River	Family Housing (130 units)	2,275
<u>FY 1968</u>			
1.	MCAS Yuma	Family Housing (40 units)	700
2.	MCAS El Toro	Family Housing (200 units)	3,500
<u>FY 1969</u>			
1.	MCAS Kaneohe Bay	Family Housing (200 units)	3,500
2.	MCAS El Toro	Family Housing (200 units)	3,500
<u>FY 1970 - 1975</u>			
	None		

APPENDIX (5) TO  
CHAPTER VI TO PART II

II-VI-5-1