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CHAPTER 1

AVIATION TRAINING AND READINESS PROGRAM

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CHAPTER 1

AVIATION TRAINING AND READINESS PROGRAM

100. AVIATION T&R PROGRAM

1. The Marine Aviation Training and Readiness (T&R) Program provides the Marine Air-Ground Task Force (MAGTF) commander with an Aviation Combat Element (ACE) capable of executing the six functions of Marine Aviation. The T&R Program is the fundamental tool used by commanders to construct, attain, and maintain effective training programs and is the foundation for the Aviation Training System (ATS). This Manual, complemented by the ATS Order (NAVMC 3710.6), provides policy and procedures for development and standardization of all USMC Aviation T&R manuals and integrated training across all Marine Aviation.
2. The standards established in this program are validated by subject matter experts and approved by the Commandant of the Marine Corps to maximize combat capabilities for assigned Mission Essential Tasks (MET) while conserving resources. Training events are based upon specific requirements and performance standards to ensure a common base of training and depth of combat capability.
3. The Marine Aviation T&R Program develops unit warfighting capabilities by providing commanders with standardized programs of instruction for training aviation units through community T&R syllabi. This T&R Program is based on Unit Training Management (UTM) principles and performance standards designed to ensure units attain and maintain proficiency in core/mission skills and combat leadership.

101. PROGRAM MANUAL OVERVIEW

1. This Manual provides aviation training communities with the requisite standards and regulations regarding the training of aircrew, MACG operators and maintainers, Aviation Ground Support (AGS), Aviation Operations Specialist (AOS), and Unmanned Aircraft System (UAS) personnel.
2. Chapter 2. Provides overarching and specific policy for individual and unit training including requirements, performance standards, readiness reporting, flight leadership, aircrew NATOPS and Instrument POIs, aircrew flight leadership, Aviation Training Systems (ATS), and Aviation Career Progression Model (ACPM) policy. A thorough understanding and familiarity of this Chapter is essential to building a relevant community T&R manual.
3. Chapter 3. This Chapter focuses on rules of conduct and policy for aircrew training and must be thoroughly referenced during the construct and review of aircrew T&R manuals.
4. Chapter 4. Provides overarching and specific policy for Core Skill Introduction training requirements and standards. The bulk of this Chapter pertains to aircrew Fleet Replacement Squadron (FRS) training, the Naval Aviation Production Process (NAPP), and the Aviator Production Plan.
5. Chapter 5. This Chapter lists roles and responsibilities of various agencies that contribute to the creation, maintenance, and sustainment of community T&R manuals. It outlines the process for facilitating T&R conferences to include the staffing of a community T&R manual to final production.
6. Chapter 6. Building upon the foundation outlined in the previous chapters, this Chapter provides a pragmatic approach to building, maintaining, and sustaining a community T&R manual. It provides the procedures, steps, and directions for

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writing chapters 1, 2 and subsequent chapters of a T&R manual, and provides a generic template to build from for each chapter.

7. Chapter 7. Provides aviation unit commanders with specific T&R guidance concerning readiness reporting in the Defense Readiness Reporting System (DRRS). It provides background and procedures for reporting readiness to accomplish Core missions, assigned missions, and OPLAN/CONPLAN missions against Mission Essential Task Lists in DRRS.

8. Chapter 8. Marine Sierra Hotel Aviation Readiness Program (M-SHARP). Provides background and overview on the aviation training management system used to track all training governed by aviation T&R manuals.

102. AVIATION T&R PROGRAM AND UNIT READINESS

1. The Aviation T&R Program implements a comprehensive, capabilities-based training system that provides mission skill proficient crews and combat leaders to MAGTF and combatant commanders. In Figure 1-1, the Unit Level Aviation T&R Program (Core Model) is the centerpiece of the foundation upon which warfighting capabilities are built. Note that Unit Level Readiness and Resource Requirements also provide essential elements that contribute to the development of warfighting capabilities.

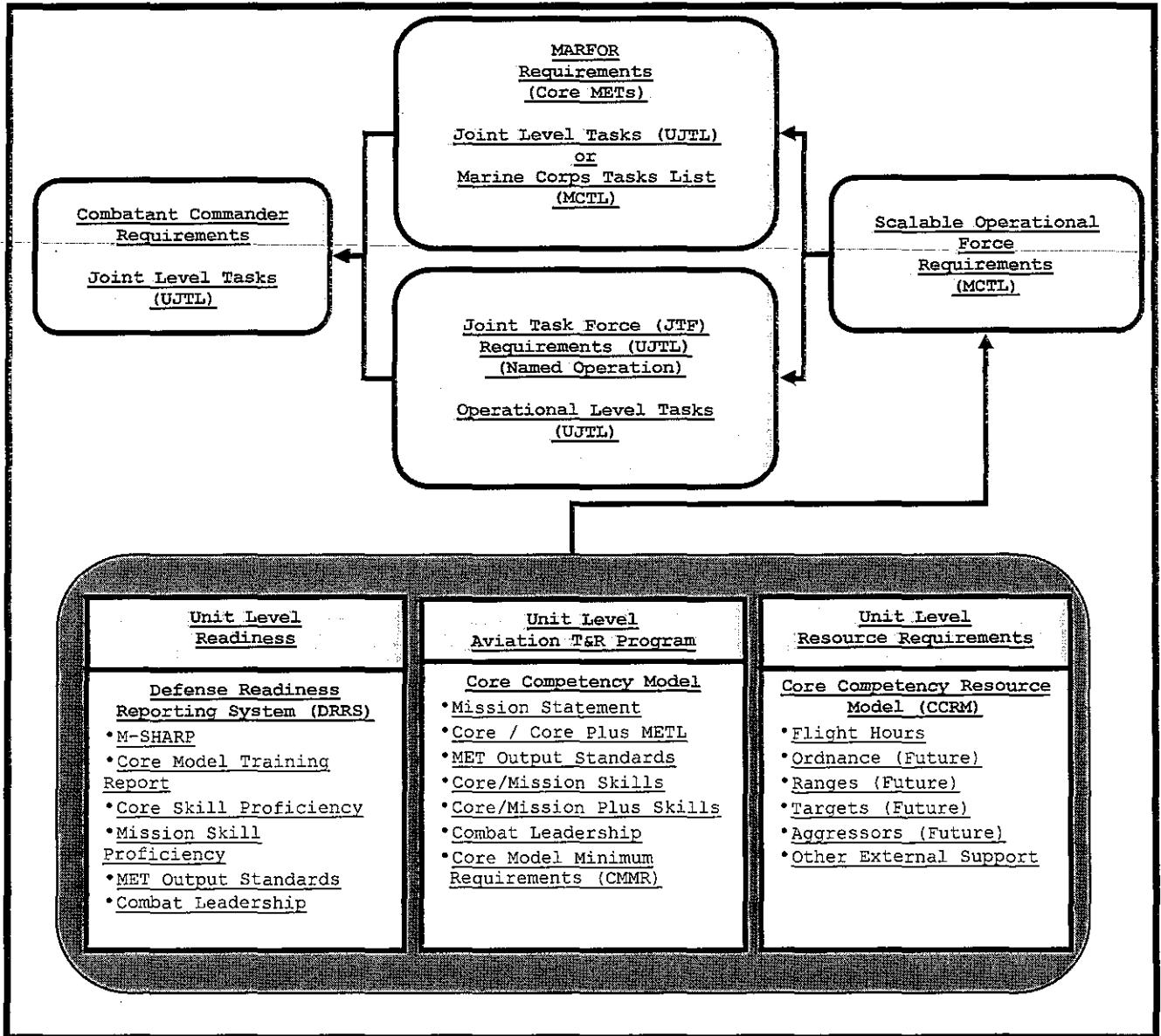


Figure 1-1.--Aviation T&R Program and Unit Readiness.

2. Readiness and Resources

a. Defense Readiness Reporting System (DRRS). The DRRS is the DoD system of record for unit readiness reporting created to provide an objective, accurate, and timely assessment of unit capabilities (DoD Directive 7730.65). Reporting is based on unit capability to accomplish specific tasks, within an established Mission Essential Task List (METL) providing a common baseline for unit readiness reporting. Each MET has one or more associated output standards which are used as reporting criteria in DRRS. These outputs are the key performance measures for readiness reporting.

(1) Marine Corps Task List (MCTL). A comprehensive list of Marine Corps tasks (MCT), doctrinally based, designed to support current and future METL development.

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(2) Mission Essential Task List (METL). A list of tasks considered essential to the accomplishment of core, assigned or anticipated missions. The METL uses the common language of the Universal Joint Task List (UJTL), Universal Naval Task List (UNTL), Marine Corps Task List (MCTL) and T&R Manuals in terms of task, condition and standard. The METL is the commander's tool for maintaining focus on mission accomplishment and forms the foundation upon which readiness reporting is made.

(3) Mission Essential Task (MET). A task selected by a force commander from the MCTL deemed essential to mission accomplishment. A MET refers to a capability for which a unit was organized or designed to perform. Most units have several tasks for which they were organized or designed and for which they train. Aviation communities will report readiness using the METL construct drawing from the MCTs documented in the MCTL approved by Marine Corps Combat Development Command-Combat Development and Integration (MCCDC-CDI) (MCO 3500.26A).

b. Marine-Sierra Hotel Aviation Readiness Program (M-SHARP). M-SHARP is the training management system for scheduling and logging T&R events, comparing logged data to community readiness metrics, and formatting readiness data within T&R Program Manual guidance.

c. Core Model Training Report (CMTR): The CMTR within M-SHARP captures unit training status with respect to Core/Mission Skill Proficiency and Combat Leadership to assist unit commanders in the formal assessment of unit readiness (Chapter 7).

3. Resources. The Core Competency Resource Model (CCRM) is a qualitative analytical tool (model) that displays external resources required to attain and maintain training/combat proficiency. This tool objectively captures and displays the required external resources for a desired level of readiness. External resources are defined as those not organic to the unit. Examples are: flight hours, simulator hours, academic hours, ordnance, ranges, targets, external loads, Helicopter Support Teams (HST), aggressor air. The CCRM (Flight Hour module) was primarily developed for use at the HQMC level as a budgetary support tool to justify the Flying Hour Program. The Flight Hour module was accredited by the Chief of Naval Operations and the Commandant of the Marine Corps. At the unit level, it may complement the Sortie Based Training Program (SBTP) by assisting units in the identification of flight hour resources needed to train the unit to core competency.

103. T&R PROGRAM ADMINISTRATION

1. The Aviation T&R Program applies to all Marine Aircraft Groups, Marine Air Control Groups, and select communities assigned to the Marine Wing Support Groups, and Marine Corps Air Stations/Facilities. TECOM ATD maintains administrative oversight of T&Rs. A complete list of aviation T&R manuals is available online (Common Access Card [CAC] is required to gain access) at <https://www.intranet.tecom.usmc.mil/hq/branches/atbl/default.aspx>

2. T&R Program Orders/Directives. The T&R Program consists of the following documents:

a. MCO 3500.14. The Aviation Training and Readiness Program Order assigns responsibilities and establishes USMC policy, procedures and direction regarding the training of Aviation personnel. Signature authority is CG MCCDC.

b. NAVMC 3500.14. The Aviation Training and Readiness Program Manual (this Manual) provides policy, standardization and procedures for community aviation T&R manuals. Signature authority is CG TECOM.

c. NAVMC 3500.XX Series. Community aviation T&R manuals contain individual training syllabi for applicable MOSs within a community. Aviation T&R manuals must comply with this Manual and may contain policy unique to a community/MOS if consistent with this Manual. These manuals are reviewed and updated on a triennial basis. More frequent reviews may occur at the discretion of the applicable community. Commandant of the Marine Corps By direction signature authority is CG TECOM.

104. EXTERNAL POLICY. Aviation training requirements listed in other applicable publications shall be adhered to, including:

1. MCBUL 1200 (MOS Manual). Specifies MOS school and training requirements.
2. OPNAVINST 3710.7 (NATOPS General Flight and Operating Instructions). Specifies Naval aviation training requirements (NATOPS Program, instrument ratings/qualifications, Naval Aviation Survival Training Program, etc.).
3. NATOPS Instrument Flight Manual NAVAIR 00-80T-112. Provides guidance and standardization for instrument flight evaluators and aircrews on criteria for evaluating the instrument flying abilities and proficiency of aircrew members and conducting NATOPS Instrument Flight Evaluations.
4. NATOPS Air Traffic Control Manual NAVAIR 00-80T-114. This manual standardizes ground and flight procedures but does not include tactical doctrine. It contains information on administrative and operational procedures for Navy and Marine Corps Air Traffic Control Facilities (ATCFs) and Fleet Area Control and Surveillance Facilities (FACSFACs), and applies on a worldwide basis.
5. MCO 3500.109 Weapons and Tactics Training Program (WTTP). The WTTP supports training programs by providing instructor and academic standardization for T&R syllabi. As the manager of the WTTP for the Marine Corps, Marine Aviation Weapons and Tactics Squadron One (MAWTS-1) produces standardized courseware to support community T&R syllabi as well as the maintenance of syllabi for advanced instructor designations, to include the Weapons and Tactics Instructor Course.
6. MCO 3500.110 (Draft). Policy And Guidance For METL Development, Review, Approval, Publication And Maintenance. This Order provides policy and procedures for Mission Essential Task List (METL) development, review, approval, publication and maintenance for units, installations, and organizations.
7. NAVMC DIRECTIVE 3710.6. The Marine Corps Aviation Training System Order . provides policy, guidance, and responsibilities for the implementation of the Aviation Training System (ATS).
8. DOD Instruction 1300.21 (Code of Conduct Training and Education) and Joint Pub 3-50.3 (Joint Doctrine for Evasion and Recovery). Specifies Survival, Evasion, Resistance, and Escape (SERE) training requirements.
9. OPNAVINST 1542.7 [Crew Resource Management (CRM) Program]. Specifies Crew Resource Management training requirements (applicable to flight units only).
10. Doctrinal Publications. Marine Corps doctrinal publications, in specific, Marine Corps Warfighting Publications (MCWP) and Marine Corps Interim Publications

(MCIP), contain the doctrine and tactics, techniques and procedures (TTPs) utilized by the Marine Corps in the prosecution of war or other assigned missions.

11. MCRP 3-0A Unit Training Management Guide. Provides a background on the philosophy, principles, and policies of the Marine Corps training management system. It also provides guidance on how to develop, support and evaluate training plans.

12. Maneuver Description Guide (MDG) (Flying Units Only). A supplemental NATOPS manual that is used to further define procedural aspects of NATOPS maneuvers which are required for standardized and effective execution in all regimes of flight. Policy and procedures are contained in MCO 3710.8, USMC NATOPS.

13. MCO 3125.1X Marine Corps Flying Hour Program (FHP) Management. Outlines the Marine Corps flying hour program goals and requirements.

14. NAVMC 1553.1. Systems Approach To Training (SAT) Users Guide. Establishes the procedures and business rules for the application of the SAT process to formal school curriculum development. The SAT is the primary source of information for instructional program development and management for Marine Corps Formal Learning Centers (FLC) and formal courses of instruction collocated at other military service schools. It is available on the TECOM website at: <https://www.intranet.tecom.usmc.mil/hq/branches/qtd/CurrentOrdersandDirectives/default.aspx>

15. MCO 1553.2. Management of Marine Corps Formal Schools and Training Detachments. This Order publishes management policies and procedures for all Marine Corps formal schools, training centers and formal courses of instruction collocated with other military Service schools.

16. MCO 1553.3 Unit Training Management Guide. Unit Training Management (UTM). This Order establishes a Marine Corps-wide Unit Training Management and evaluation process. Provides policy that all elements of the Total Force will adhere to when developing, conducting, and evaluating training for wartime missions.

17. MCO 1553.4. Professional Military Education (PME). This Order defines the objectives, policies, programs, and responsibilities for coordinating the PME of Marines.

18. MCO 1553.6. Development, Management, and Acquisition of Interactive Courseware (ICW) for Marine Corps Instruction. This Order establishes policy, prescribes requirements, and assigns responsibilities for the development, management, and acquisition of ICW for Marine Corps instructional programs..

19. MCO 3500.26. Universal Naval Task List. A single source document that combines the Navy Tactical Task List (NTTL) and the Marine Corps Task List (MCTL). The UNTL's tactical level of war tasks are written utilizing the common language and task hierarchy of the Universal Joint Task List (UJTL). The UNTL is architecturally linked to the UJTL.

20. MCO 3000.13. Marine Corps Readiness Reporting SOP. Promulgates policies and procedures for reporting readiness on Marine Corps organizations.

21. NAVAIR 00-80T-115. U.S. Marine Corps Expeditionary Airfields and Marine Corps Air Stations NATOPS Manual.

22. MCO 1000.8. USMC Fleet Assistance Program.

23. Mission Planning Systems. Aviation communities shall ensure standardized, automated mission planning system training is embedded into T&R syllabi. This training should be integrated appropriately into phase and stage training. For additional information regarding mission planning systems, contact:

NAVAIRSYSCOM PMA-281 (Mission Planning Systems USMC Fleet Liaison)
 DSN: 757-7974
 Commercial: (301)-757-7974

SPAWAR (PFPS/TOPSCENE/JMPS)
 DSN: 442-8086
 Commercial: 1-800-759-1263
 Email: c4ihd@nosc.mil or c4ihd@philly.navy.smil.mil
 Website: <https://lifeline.spawar.navy.mil>

105. AVIATION TRAINING COMMUNITIES

1. Tactical Flight Communities. Subdivided into 3 categories:

	<u>Aircraft</u>	<u>Unit</u>
Fixed Wing	AV-8B	VMA
	FA-18A/C	VMFA
	FA-18D	VMFA (AW)
	KC-130T/J	VMGR
	EA-6B	VMAQ
	F-35B	VMFA
Rotary Wing	AH-1W/Z	HMLA
	UH-1N/Y	HMLA
	CH-46E	HMM
	CH-53D/E	HMH
Tiltrotor	MV-22B	VMM

2. Support Aircraft. Those fixed-wing or rotary-wing aircraft acquired and/or retained for Operational Support Airlift (OSA), Search and Rescue (SAR), Adversary Support, and Executive Transport (HMX-1).

Operational Support	<u>Aircraft</u>	<u>Unit</u>
	UC-12F/M/W	VMR-1 or VMR Det
	C-9B	VMR-1
	C-20G	VMR Det
	UC-35C/D	VMR-1 or VMR Det
Adversary Support	<u>Aircraft</u>	<u>Unit</u>
	F-5F/N	VMFT-401
Search & Rescue	<u>Aircraft</u>	<u>Unit</u>
	HH-46E	H&HS Cherry Point
	HH/UH-1N	H&HS Yuma

<u>Executive Transport</u>	<u>Aircraft</u>	<u>Unit</u>
	VH-3D	HMX-1
	VH-60N	HMX-1
	CH-46E	HMX-1
	MV-22B	HMX-1

3. Aviation Ground Communities

a. Aviation Ground communities include:

<u>Marine Air Control Group (MACG)</u>	<u>Agency</u>
Marine Tactical Air Command Sqdn (MTACS)	Tactical Air Command Center (TACC)
Marine Air Control Sqdn (MACS)	Marine Air Traffic Control (MATC)
	Meteorological and Oceanographic (METOC)
	Tactical Air Operations Center (TAOC)
Marine Air Support Sqdn (MASS)	Direct Air Support Center (DASC)
Low Altitude Air Defense Bn (LAAD)	Low Altitude Air Defense (LAAD)

Note: In 2010, the 5900 Maintenance community transitioned to the Aviation T&R Program. Commands who are assigned 5900 maintenance personnel shall train them in accordance with this Manual and the applicable community T&R manual. All training shall be documented using M-SHARP and performance records.

<u>Aviation Ground Support (AGS)</u>	
Aviation Ground Support Department (AGSD)	Aircraft Rescue and Firefighting (ARFF)
	Aviation Operations Specialist (AOS)
	Expeditionary Airfield (EAF) Services
Marine Wing Support Sqdn (MWSS)	Aircraft Rescue and Firefighting (ARFF)
	Aviation Operations Specialist (AOS)
	Expeditionary Airfield (EAF) Services
<u>Marine Corps Installation (MCI)</u>	
Air Traffic Control	Air Traffic Control (ATC)
Airfield Services	Aircraft Rescue and Firefighting (ARFF)
	Aviation Operations Specialists (AOS)
Regional METOC Centers	Meteorological and Oceanographic (METOC)

b. Additional Aviation Ground Training Guidance

(1) Aviation Ground personnel assigned to any of the aviation ground communities listed above shall be trained per this Manual using the applicable community T&R manual.

(2) Aviation Ground personnel in the ATC, METOC, EAF, AOS, and ARFF communities are often assigned Fleet Assistance Program (FAP) or Temporary Duty (TDY) assignments to a nearby air stations. The gaining air station shall continue

training FAP/TDY personnel per their respective T&R Manual, and document the Marine's training using M-SHARP and performance records.

(3) Aviation Ground personnel assigned to a non-operational unit shall, when possible, continue to train per the provisions of the Marine Aviation T&R Program and the applicable T&R manual.

4. Unmanned Aircraft Systems

<u>Unit</u>	<u>Aircraft</u>
Marine Unmanned Aerial Vehicle Squadron (VMU)	RQ-7B
Various MEF Units	RQ-11B

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CHAPTER 2
TRAINING POLICIES

200. TRAINING POLICY

1. Purpose. To provide policy for unit and individual training to include requirements, performance standards, readiness reporting, and management of training records.

2. Core Model. The CMC-approved Core Competency Model (Core Model) is the basic foundation or standardized format by which all Aviation T&Rs are constructed. The Core model provides the capability of quantifying both unit and individual training requirements and measuring readiness. This is accomplished by linking community Mission Statements, Mission Essential Task Lists, Output Standards, Core and Mission Skill Proficiency Requirements and Combat Leadership Matrices. The following phases of instruction outline the structure. See Chapter 6 for detailed rules, regulations and requirements of the Core Model.

Phase	TERM	DEFINITION
1000	Core Skill Introduction	Entry level training required to receive or be eligible for assignment of a primary MOS. Includes such training as systems / equipment, operations familiarization, initial crew procedures, and initial exposure to core skills. For Fleet Replacement Squadron (FRS) training see chapter 4 of this Manual.
2000	Core Skill	Fundamental, environmental, or conditional capabilities required to perform basic functions. These basic functions serve as tactical enablers that allow crews to progress to the more complex Mission Skills.
3000	Mission Skill	Mission Skills enable a unit to execute a specific MET. They are comprised of advanced event(s) that are focused on MET performance and draw upon the knowledge, abilities, and situational awareness developed during Core Skill training.
4000 4500	Core Plus Skill Mission Plus	Training events that can be theater specific or that have a low likelihood of occurrence. They may be Fundamental, environmental, or conditional capabilities required to perform basic functions.
5000	Instructor Training	Instructor training events.
6000	Requirements, Certifications, Qualifications, and Designations (R, C, Q & D).	Mandatory directed training events that lead to specific certifications, qualifications, and or designations. Additionally, this phase provides Combat Leadership requirements.
7000	Reserved	Reserved for future use - to be assigned by ATD.
8000	Academics	Training events to enhance professional understanding of Marine Aviation and the MAGTF. Includes position training for Aviation Ground communities and ACPM.
9000	Reserved	Reserved for M-SHARP use - to be assigned by ATD.

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3. Policy. The Core Model is a skill progression based model defined in community T&R manuals based on the following Unit Training Management (UTM) edicts contained in MCRP 3-0A:

- a. Train as you fight.
- b. Commanders are responsible for training.
- c. Use standards based training.
- d. Use mission oriented training.
- e. Train the unit to fight as part of a MAGTF.
- f. Train to sustain proficiency.
- g. Train combat flight leaders.
- h. Foster development and refinement of aviation skills.
- i. Incorporate Operational Risk Management (ORM) in all levels of training to preserve assets.

4. Marine Aviation Training incorporates the following concepts and programs to efficiently prepare a unit to rapidly plan and execute their assigned Mission Essential Tasks to a clearly defined output standard in support of contingency operations.

- a. Subject Matter Expert (SME) defined Standards.
- b. Unit is responsible for developing their training plan; see MCRP 3-0A for guidance on developing unit training plans.
- c. Command Oversight and Responsibility. Each level of command shall monitor subordinate commands to ensure timely delivery and equitable distribution of training resources and personnel required to ensure the safe execution of training plans within the allotted time to train.
- d. Marine Corps Aviation Training System (ATS) Incorporation. The purpose of ATS is to develop and maintain a fully integrated training system across all of Marine Aviation. The training system has undergone a cultural shift where the training devices are operationally focused under the control of the Wing Commanders. Training is optimized based upon a Systems Approach to Training (SAT) derived curriculum (T&R manuals) exploiting live, virtual and constructive training environments and requisite courseware supported by established ATS and Marine Aviation Training System Site (MATSS) structure. Training system integration is achieved by standardization and evaluation (S/E) of certifications, qualifications, and designations; ensuring the currency and relevance of training devices via Concurrency Management (CCM); integrating and managing training information; and providing an effective forum for identification of the operating forces' training needs and issues via the Training Management Process (TMP).
- e. Instructor Standardization through local and formal courses. Unit commanders must tend to the long-term health of their command by ensuring maximum participation in formal resident courses. Commanders shall provide personnel opportunities to attend formal and operational level courses of instruction as

required by this Manual. Attendance at formal aviation courses enhances the warfighting capabilities of the unit.

f. Flight Leadership Program (FLP) Standardization. Each MAW's ATS structure will support the MAW CG in implementing the FLP. Local MATSS will utilize available infrastructure and inherent processes to support improvements in the quality of flight leadership training, ensure standardization, and facilitate evaluation.

-----g. Risk Management. The process of risk mitigation includes risk assessment, risk decision making, and implementation of effective risk controls. T&R requirements and NATOPS procedures are controls developed to mitigate hazards identified over decades of operational experience. Reliance on these controls is crucial. Leadership emphasis on risk mitigation and aviation fundamentals during all aspects of training is required in developing and fostering a climate that promotes flight discipline and adherence to established procedures and requirements. Risk management and mitigation must be institutionalized at all levels and throughout the training syllabus.

5. Unmanned Aircraft Systems (UAS). There are varying T/M/S within the unmanned aircraft system (UAS) family of platforms, with an accompanying array of policies, procedures and CONOPS. Employment of each UAS is managed at multiple levels of command within the MAGTF, both from the ACE and the GCE. Due to the wide variance of capabilities and limitations across the UAS T/M/S platforms, some policies in this Manual may not apply. As such, UAS syllabus sponsors shall ensure T&R manuals adhere to all applicable policies and are authorized to exclude policy that does not apply to the UAS T/M/S in question, in consideration of its unique mission and capability.

6. First Tour Assignment

a. Naval Aviators (NA), Naval Flight Officers (NFO), and enlisted aircrew shall be assigned to an operational squadron for a minimum of 2 years (optimally 3 years) after completing Core Skill Introduction phase training. Commands shall not assign NAs/NFOs/CCs outside the squadron unless such assignment is a T&R syllabus requirement.

b. CG TECOM ATD is the approval authority for deviations from First Tour Assignment policy. Requests for deviation from this policy shall be requested via message to CG TECOM ATD via the operational chain of command with info notification to the syllabus sponsor.

c. Marine Aviation Command and Control Personnel (72XX/59XX) Assignments. Aviation Command and Control (72XX/59XX) personnel should be assigned to their respective PMOS units for a minimum of 2 years after completing Core Skill Introduction training. This will ensure personnel achieve proficiency in their PMOS before being assigned to other duties. Once this requirement has been met, personnel may be assigned to billets outside of their PMOS.

201. UNIT TRAINING

1. Unit Training

a. Unit Training Plans. The Core Model provides a foundation for developing training plans by clearly delineating unit training requirements. Training personnel must balance the requirements of creating an instructor base with the requisite production capacity to train replacement crew(s) within time constraints

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and asset availability without over tasking maintenance and supply. Units should use the Core Model Minimum Requirements (CMMR) as a reference point to design, implement and evaluate training plans. See chapter 6 of MCRP 3-0A for guidance in developing unit training plans.

b. Core Model Minimum Requirement (CMMR). The CMMR of a unit is an objective standard of the number of crews formed and proficient to execute the output standards defined in the Mission Essential Task worksheets. Attaining CMMR is considered the training standard, as it forms the basis for assessing readiness; therefore, units shall train to achieve CMMR. If a unit falls short of CMMR, squadron/battalion commanders must refocus unit training or request assistance from higher headquarters to allocate assets required to achieve CMMR within the time constraints established in the TEEP.

c. Instructor CMMR Deviations. Units shall train to achieve T&R required certifications, qualifications and designations that support core competency requirements. Unit instructor designations shall be balanced with mission requirements and time to train. Tactical flying squadrons shall strictly control the number of instructors (WTI, ACTI, LATI, TERFI, NSI, etc.) produced per the applicable CMMR. Time constraints dictated by the TEEP and scheduled arrival of replacement personnel may necessitate an increased number of instructors above CMMR to boost production capacity within the squadron. Tactical flight squadron commanding officers shall obtain written approval from the MAG commanding officer to train additional instructors in excess of the requirements listed in the respective T&R manuals.

d. Carrier Qualification. When required to operate from aviation decks, units shall maintain both day and night shipboard qualification. When aviation decks are not available, these units shall maintain ship skills by staying current with Field Carrier Landing Practice (FCLP) in accordance with their respective T&R syllabus. Personnel should consult the NWP, LHA/LHD, CV, LSO, individual aircraft NATOPS manuals, and current NAVAIR instructions to ensure appropriate training of personnel for shipboard operations.

e. Fixed Wing Expeditionary Airfield (EAF)/Forward Site Training and Qualification. Fixed wing tactical squadrons shall qualify on an available EAF/forward site, or on a runway configured for EAF/forward site operations when required. Each aircraft wing and fixed wing tactical group shall assign a Landing Signal Officer (LSO)/Landing Site Supervisor (LSS) to monitor the EAF/forward site training and qualification program. KC-130 operations do not require an LSO/LSS. The LSO will maintain data on available EAFs/forward sites and air stations where EAF/forward site operations are available. EAF/forward site training shall incorporate expeditionary air traffic control capabilities of the MATC Detachment or MATC Mobile Team (MMT) participation whenever feasible.

f. LSO Qualification. Commanding officers shall designate field-qualified LSOs per the LSO NATOPS and assign them at the squadron and group level to control FCLP periods. If possible, the LSO shall be field EAF-qualified. A VSTOL LSS should serve as a supervisor for VSTOL operations from all forward sites. LSOs/LSSs shall brief all aircrew on current launch and recovery publications prior to EAF/forward site training. Aircrews shall be FCLP/forward site qualified prior to EAF/forward site operations and day EAF/forward site qualified prior to night qualification. During EAF/forward site qualification, all pattern work will be flown under VMC.

g. Tactical Aircrew/C2 Integration Training. Aviation Command and Control often requires external syllabus support for both aircrew skill progression and maintaining MACCS proficiency. Tactical aircrew and MACCS personnel shall actively

collaborate to create training opportunities. In addition to the command/information exchanges with air traffic control agencies necessary for safe and coordinated launch and recovery, aircrew shall coordinate with Marine Aviation Command and Control (AC2) agencies (or their joint counterparts). Exercising C2 functions and information exchanges are necessary for airspace battle management training and increase application of air power efficiency within the ACE. Coordinated events maximize the training leveraged from each occurrence for both the aircrew and aviation ground communities.

h. MACCS Integrated System Training (MISTEX). The purpose of a MISTEX is to integrate all Marine AC2 agencies (TACC, DASC, TAOC, ATC, LAAD) in a live, virtual, or constructive scenario to sustain MACCS performance currency and demonstrate proficiency in MACCS employment. MISTEX is necessary to exercise information flow, communications and datalink coordination. Crew coordination is exercised, emphasizing critical information flow requirements between MACCS agencies key personnel and ACE Battlestaff members. All elements of the MACCS shall maintain the capability to effectively function as part of an integrated airspace command and control system. The MISTEX may be used to evaluate MACCS mission skills, deployment readiness, and Air Tasking Order (ATO) cycle execution by the ACE commander. A MISTEX should incorporate a Multi-TADL Network (MTN) and digital backbone to provide the wing commander a Common Tactical Picture (CTP), conduct ATO planning and execution through the use of tactical C2 data systems such as TBMCS, C2PC and AFATDS.

i. Stinger Missile Training. LAAD Gunners, assigned to a LAAD Battalion, should fire a minimum of one Stinger Missile during a three-year period.

2. Emergency Procedures. All aircrew shall complete a monthly emergency procedures examination and a quarterly emergency procedures simulator review. If the community lacks a simulator or one is not available, the command shall substitute with an appropriate cockpit-cabin drill for the emergency procedures simulator review.

3. Flight Leadership Program. The goal of the flight leadership program is to provide the structure and requirements necessary for standardized training, development, and designation of flight leaders at tactical flying squadrons. This policy provides Squadron, MAG, and Wing Commanders the tools necessary to manage a standardized flight leadership program. The foundational elements of this policy include standardization of flight leadership POIs, evaluation procedures, and oversight measures. Details of this Program are outlined in paragraphs 202 and 213.

4. Combat Leadership for Aviation Ground Communities. The goal of the Combat Leadership program is to focus the training of the Marines that pull together the tactical agency or unit into a single, cohesive team capable of accomplishing the unit METL. The duties and responsibilities of the combat leader will extend beyond those of the tactical watch-stander billets and will provide the unit with personnel trained to tactically deploy and employ their agency or unit.

5. Standardized Functional Check Flight (FCF) Policy

a. Wing FCF SOPs. All Wing SOPs shall incorporate standardized FCF procedures that include the preflight planning and execution of FCFs. Oversight for standardization across all Wings is under the cognizance of DC AVN.

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b. Functional Check Pilot (FCP) Qualifications. Aviation flying communities shall implement standardized FCP syllabi in individual T&R manuals. Standardized FCP workup/evaluation events shall be delineated in individual T&R manuals under the Requirements, Qualifications, Designations Phase (6000 Phase). The syllabi shall be structured in accordance with directives and guidelines established in the current version of the COMNAVAIRFORINST 4790 aviation maintenance manual and Wing SOPs. At a minimum, the FCP certification event shall be evaluated. FCP qualification requires successful completion of a community standardized syllabus and a designation letter from the CO.

6. Standardized Instructor Designations. Instructor designations are assigned to personnel based on their ability to conduct academic ground and/or airborne instruction of a core, mission, or core plus skill or other training requirements. Instructor designations are designed to enhance standardization and safety while training personnel in specific skills. T&R instructor designation/re-designation requirements should be consistent with the instructor requirements listed in the MAWTS-1 Course Catalog, MAWTS-1 C3 Course Catalog, NATOPS, and other directives, as applicable.

a. Fleet Replacement Squadron Instructor (FRSI). Fleet Replacement Squadrons (FRS) shall ensure standardized FRSI syllabi are included in individual T&R manuals. Standardized FRSI workup/evaluation events shall be delineated in individual T&R manuals under the Instructor Training Phase (5000 Phase). FRSI designation requires successful completion of a community standardized syllabus and a designation letter from the CO.

b. Contract Simulator Instructors (CIs). Each community that utilizes CIs for simulation training shall build and maintain a standardized CI syllabus for inclusion in individual T&R manuals.

c. Basic Instructor Pilot (BIP). Assault Support communities (Rotary Wing, Tiltrotor, and KC-130 T/M/S) shall ensure standardized BIP syllabi are included in individual T&R manuals. This syllabus introduces the fundamental skills required of instructor pilots in fleet squadrons. Standardized BIP workup/evaluation events shall be delineated in individual T&R manuals under the Instructor Training Phase (5000 Phase). BIP designation requires successful completion of a community standardized syllabus and a designation letter from the CO.

d. Basic Instructor (BI) and Senior Instructor (SI). Aviation Ground communities (see paragraph 103.3 of this chapter) shall ensure BI and SI syllabi standardized in the MAWTS-1 C3 Course catalog are implemented in individual T&R manuals. BI and SI training provides proficient and experienced personnel the additional skills necessary to instruct, evaluate, and recommend trainees for core, mission or core plus skill completion, certification, qualification, or designation. The SI may serve as primary assistant to the unit WTTP Officer in development of courseware, supervising BI's and implementing the unit WTTP. See the C3 Course Catalog for further information, URL

<https://www.intranet.tecom.usmc.mil/sites/mawts1/departments1/newc3/default.aspx>

ARFF, EAF and AOS communities shall include the BI and SI syllabi events in their respective T&Rs.

e. Assistant NATOPS Instructor (ANI) / NATOPS Instructor (NI). Operational Support Airlift (OSA) communities (UC-35C/D, UC-12F/M/W, C-20G, and C-9B) shall ensure standardization for training by utilizing ANIs/NIs as instructors for all initial training flights (1000-4000) at OSA units. OSA unit commanders may also use designated unit ANIs/NIs to administer NATOPS or instrument checks during Command Aircraft Crew Training Simulator sessions.

7. Unit Readiness Reporting

~~a. Commanding officers report the status of unit readiness and training~~ through the Defense Readiness Reporting System-Marine Corps (DRRS-MC). DRRS-MC is governed by the HQMC Plans, Policy, and Operations (PP&O) Readiness Branch, in accordance with policy and procedures established by MCO 3000.13 (Marine Corps Readiness SOP).

(1) Chapter 7 of this Manual provides specific guidance on DRRS-MC reporting, commander's assessments, and introduces the Naval Aviation Enterprise (NAE) Marine Aviation Current Readiness Improvement Program (CR).

(2) Chapter 1 of each T/M/S T&R Manual further addresses readiness reporting.

b. Core Model Minimum Requirement (CMMR) and Readiness

(1) Aviation Flying Units. The CMMR for Core Skill Proficiency (CSP), Mission Skill Proficiency (MSP), MET-capable Crews, and Combat Leadership (CL) reflects the number of crews and Combat Leaders to be trained/designated by each unit given 90% or better crew manning.

(2) Aviation Ground Units. The CMMR for CSP, MSP, and CL reflects the number of CSP/MSP crews and Combat Leaders to be trained by each unit given 100% crew manning as defined in specific Aviation Ground T&Rs.

(3) For official readiness reporting, the number of formed crews capable of performing the MET sortie, along with Combat Leadership, is compared to the Crew CMMR and Combat Leadership CMMR. The number of CSP crews on-hand compared to Core Skill CMMR is a useful training benchmark for internal use at the unit level but is not used for official readiness reporting.

c. Core Model Training Report (CMTR). The CMTR is an M-SHARP tool that tallies trained aircrew toward each CMMR category, including CSP/MSP, instructors, designated Combat Leaders, and MET-capable Crews.

(1) The CMTR provides a color-coded display representing the level of unit training attained toward T&R specific category CMMR.

(2) Individuals are "counted" in the CMTR once they have first attained and then maintained core/mission skill proficiency, qualification, instructor or Combat Leadership designation. The CMTR will better inform commanders when considering their overall unit's training accomplished.

(3) Adjusted Core Model Minimum Requirement (ACMMR) (Flying Units Only)

(a) The T&R CMMR is based upon crew manning levels; 90-100% for flying units. However, when unit crew manning falls below total crews, an adjustment is made within the CMTR to the CSP, MSP and Combat Leadership CMMR in order to provide unit commanders a tool to determine how well the unit is training the crews it

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possesses. ACMMR functionality within the CMTR provides a metric to estimate training plans given the number of crews it possesses.

(b) The ACMMR shall not be used as the basis for the commander's DRRS-MC readiness assessment.

202. INDIVIDUAL TRAINING

1. Individual Training Philosophy. Individual training and the mastery of Core Skills, Mission Skills, and Combat/Flight Leadership (2000, 3000, and 6000 phase events) serve as the primary building blocks for unit combat readiness. Secondary emphasis should be placed on Core Plus and Instructor Training (4000 and 5000 phase events, respectively). Training programs are based on increasingly challenging events, with the requirement for periodic revalidation of Core Skill Proficiency (CSP) and Mission Skill Proficiency (MSP).

2. Program of Instruction (POI) Assignment. All individuals undergoing training are assigned to a POI. A POI is a group of events or a "subset" within a syllabus that an individual is required to execute. POIs include; Basic, Conversion, Transition, Series Conversion, Refresher and Maintain. POI assignment shall be delineated in community T&R manuals. Special POIs such as Flight Leadership are designed specifically to designate tactical flight leaders assigned to flying squadrons. Assignment to this POI is in addition to one of the POIs listed above and applies to a select few, see paragraph 202.f. POIs applicable to each event shall be reflected in the T&R syllabus matrix under the POI column.

a. Basic (B) POI. Initial accession personnel shall be assigned to the Basic POI of the applicable T&R syllabus.

b. Conversion (C) POI

(1) Model Conversion personnel (personnel converting from one model aircraft/system to another within the specific aircraft/unit type e.g., CH-46 to CH-53 or EA-6 to FA-18), shall be assigned to the Conversion POI of the applicable T&R syllabus.

(2) Conversion training for NFOs is defined as syllabus instruction designed to convert an NFO's primary MOS from one aircraft to another, regardless of type. NFOs undergoing conversion training shall be assigned to the Basic POI.

c. Series Conversion (SC) POI. Personnel converting from a particular series of aircraft or weapons system to a new series that has significantly different aircraft or weapons systems characteristics shall be assigned to either the Basic or SC POI. SC aircraft include KC-130T/KC-130J, CH-53D/CH-53E, UH-1N/UH-1Y, AH-1W/AH-1Z, and CH-46/HH-46D/HH-46E.

d. Transition (T) POI. Personnel changing aircraft or weapon systems shall be assigned to either the Basic or Transition POI. Marine Corps aircraft types include the following: Fixed Wing jet, VSTOL jet, STOVL jet, Rotary Wing, Fixed Wing Transport, and Tiltrotor. MACCS agencies with different weapons systems include: TACC, TAOC, DASC, LAAD, UAS and MATC.

e. Refresher (R) POI

(1) In the case of aircrew, they will be assigned to the Refresher POI per Chapter 4 figure 4-2. In the case of Aviation Ground personnel, they will be assigned to the Refresher POI as prescribed in the community T&R manuals.

(2) FRS Refresher Training. 1000 Phase FRS Refresher training is prescribed for Pilots and NFOs who have not flown the model aircraft within specified time intervals. Upon completion of Core Skill Introduction Refresher Training, Pilots and NFOs shall be assigned to the Refresher POI conducted at the tactical squadron. Pilots and NFOs shall complete Core Skill Introduction Refresher Training per paragraph 405.

(3) Aviation Ground Refresher POI. Aviation Ground personnel who have been out of their primary MOS greater than 36 months shall be assigned to the Refresher POI.

f. Flight Leadership (FL) POIs. Tactical flight communities shall implement community standardized flight leadership POIs for the following designations: Section Leader, Division Leader, Flight Leader, Mission Commander/Air Mission Commander, and Refueling Area Commander (Appendix F and paragraph 213).

g. Maintain (M) POI. Once proficiency has been attained by initial POI (B, C, SC, T, or R) in a Core, Mission, or Core Plus skill, that individual will be reassigned to the Maintain POI (see para 203 below for proficiency requirements).

203. TRAINING PROFICIENCY - CORE SKILL PROFICIENCY (CSP), MISSION SKILL PROFICIENCY (MSP), AND CORE PLUS

Core Skill Proficiency (CSP)	CSP is a measure of training completion for 2000 Phase events. CSP is attained by executing all events listed in the Attain Table for each Core Skill. The individual must be simultaneously proficient in all events within that Core Skill to attain CSP.
Mission Skill Proficiency (MSP)	MSP is a measure of training completion for 3000 Phase events. MSP is attained by executing all events listed in the Attain Table for each Mission Skill. The individual must be simultaneously proficient in all events within that Mission Skill to attain MSP. MSP is directly related to Training Readiness.
Core Plus Skill Proficiency (CPSP)	CPSP is a measure of training completion for 4000 Phase "Skill" events. CPSP is attained by executing all events listed in the Attain Table for each Core Plus Skill. The individual must be simultaneously proficient in all events within that Core Plus Skill to attain CPSP.
Core Plus Mission Proficiency (CPMP)	CPMP is a measure of training completion for 4000 Phase "Mission" events. CPMP is attained by executing all events listed in the Attain Table for each Core Plus Mission. The individual must be simultaneously proficient in all events within that Core Plus Mission to attain CPMP.

Note

The Core Plus Phase (4000 Phase) of Instruction may consist of both Core and Mission Skills. Individual updating in the 4000 phase may consist of both Core Plus Skill Proficiency (CPSP) and Mission Plus Skill Proficiency (MPSP). In this paragraph CPSP and MPSP will be referred to by its collective Stage title: Core Plus Proficiency (CPP). See Chapter 6 for additional guidance.

1. Attain Proficiency. Individuals attain CSP, MSP, and CPP by completing those events listed in the Attain Tables in their community T&R. Attainment of CSP, MSP, and CPP is by individual Core, Mission, or Core Plus Skill.

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a. Basic (B) POI. Proficiency is attained in a Core/Mission/Core Plus Skill by executing all events listed in the Attain Table for each Core/Mission/Core Plus Skill. The individual must be simultaneously proficient in all events within the Core/Mission/Core Plus Skill to attain proficiency.

b. Conversion (C) POI. Proficiency is attained in a Core/Mission/Core Plus Skill by executing all C-coded events listed in the Attain Table for each Core/Mission/Core Plus Skill. The individual must be simultaneously proficient in all C-coded events within the Core/Mission/Core Plus Skill to attain proficiency.

(1) Conversion (C) POI Updating. When all C-coded events in a Core/Mission/Core Plus Skill are completed, all remaining events in that Core/Mission/Core Plus Skill are updated. The individual must be simultaneously proficient in all C-coded events within the Core/Mission/Core Plus Skill to attain proficiency.

(2) All remaining events are updated regardless of their proficiency status (Proficient, Never Been Attempted [NBA], Incomplete, and Delinquent chained events are all updated).

c. Series Conversion (SC) POI. Proficiency is attained in a Core/Mission/Core Plus Skill by executing all SC-coded events listed in the Attain Table for each Core/Mission/Core Plus Skill. The individual must be simultaneously proficient in all SC-coded events within the Core/Mission/Core Plus Skill to attain proficiency.

(1) Series Conversion (SC) POI Updating. When all SC-coded events in a Core/Mission/Core Plus Skill are completed, all remaining events in that Core/Mission/Core Plus Skill are updated. The individual must be simultaneously proficient in all SC-coded events within the Core/Mission/Core Plus Skill to attain proficiency.

(2) All remaining events are updated regardless of their proficiency status; Proficient, NBA, Incomplete, and Delinquent chained events are all updated.

d. Transition (T) POI. Proficiency is attained in a Core/Mission/Core Plus Skill by executing all T-coded events listed in the Attain Table for each Core/Mission/Core Plus Skill. The individual must be simultaneously proficient in all T-coded events within the Core/Mission/Core Plus Skill to attain proficiency.

(1) Transition (T) POI Updating. When all T-coded events in a Core/Mission/Core Plus Skill are completed, all remaining events in that Core/Mission/Core Plus Skill are updated. The individual must be simultaneously proficient in all T-coded events within the Core/Mission/Core Plus Skill to attain proficiency.

(2) All remaining events are updated regardless of their proficiency status (Proficient, Never Been Attempted [NBA], Incomplete, and Delinquent chained events are all updated).

e. Refresher (R) POI. Proficiency is attained in a Core/Mission/Core Plus Skill by executing all R-coded events listed in the Attain Table for each Core/Mission/Core Plus Skill. The individual must be simultaneously proficient in all R-coded events within the Core/Mission/Core Plus Skill to regain proficiency.

(1) Refresher (R) POI Updating. When all R-coded events in a Core/Mission/Core Plus Skill are completed all remaining events in that Core/Mission/Core Plus Skill are updated (see note below). The individual must be

simultaneously proficient in all R-coded events within the Core/Mission/Core Plus Skill to attain proficiency.

Note

Individuals assigned to the Refresher POI are required to complete Basic POI events that have never been completed. Additionally, NBA and Incomplete events are not updated and must be completed.

2. Maintain Proficiency. Individuals maintain CSP, MSP, and CPP by executing events in the Maintain Table for each skill.

a. Core Skill Maintain Updating. Once an individual has attained CSP in a specific Core Skill(s) in the initially assigned POI (B, C, SC, T, R), the individual is reassigned to the Maintain POI in that Core Skill. He will then maintain CSP utilizing the Refresher POI updating rules for that Core Skill. Individuals can be attaining CSP in the initially assigned POI while maintaining proficiency in other Core Skills in the Refresher POI.

b. Mission Skill Maintain Updating. Once an individual has attained MSP in a specific Mission Skill in the initially assigned POI (B, C, SC, T, R), the individual is reassigned to the Maintain POI in that Mission Skill. He will then maintain MSP utilizing the Refresher POI updating rules for that Mission Skill. Individuals can be attaining MSP in the initially assigned POI while maintaining proficiency in other Mission Skills in the Refresher POI.

c. Core Plus Skill Maintain Updating. Core Plus updating includes both Core Plus Skills and Mission Plus Skills. Once an individual has attained either Core Plus Skill or Mission Plus Skill in a specific Core Plus Skill or Mission Plus Skill in the initially assigned POI (B, C, SC, T, R), the individual is reassigned to the Maintain POI in that Core Plus/Mission Plus Skill. The individual will then maintain CPSP or MPSP utilizing the Refresher POI updating rules for that Mission Skill. Individuals can be attaining MSP in the initially assigned POI while maintaining proficiency in other Mission Skills in the Maintain POI.

3. Regaining CSP/MSP Proficiency

a. Individual

(1) For an individual to regain proficiency of a "delinquent event" (i.e. event re-fly interval exceeded) in a Core/Mission/Core Plus Skill, the individual is required to complete that "delinquent event" with another crewmember/flight lead who is proficient in that event.

Note

See Chapter 3 and community T&Rs for specific requirements in Low Level Flight, Night Systems, and Air Combat Maneuvering.

(2) All Events in the Maintain Table/POI for a Core/Mission/Core Plus Skill. The individual must re-fly all delinquent R-Coded events in the Attain Table for that Core/Mission/Core Plus Skill.

b. Unit. If an entire unit loses proficiency, unit instructors shall regain proficiency by completing event(s) with instructors from another like unit; if not feasible, proficiency shall be regained by completing event(s) with another instructor. If a unit has only one instructor and another instructor is not

available, instructor proficiency shall be regained with another aircraft commander or as designated by the commanding officer.

204. TRAINING PREREQUISITES

1. Prerequisite. A prerequisite is a requirement that shall be completed prior to commencing another training evolution and are specified in the respective T&R manuals. A prerequisite may be a POI event, lecture, laboratory, academic, certification, qualification, designation, computer based training event, stage or phase. Prerequisites may be assigned to stages, phases, and events.

2. An individual shall be proficient in the prerequisite event. See policy on prerequisite waiver paragraph 217 for exceptions.

205. EVENT REQUIREMENTS

1. Event Sequencing. Personnel should be scheduled to complete T&R events of a Core, Mission, or Core Plus Skill in sequential order.

2. Event Completion

a. Event completion is defined as successful demonstration or evaluation of the performance standard.

b. When supervising the execution of an event, unit instructors/leaders shall ensure the individual demonstrates proficiency per the event performance standard prior to logging the event.

c. Evaluating proficiency normally entails objective and subjective assessments. When an individual fails to accomplish the requirements of an event per the performance standard, the event shall not be logged and the proficiency status for that event remains unchanged.

d. When an event is completed per the performance standard, the event shall be logged in M-SHARP by entering the appropriate event code. When entered into M-SHARP, the event proficiency date is automatically updated to reflect the event completion date.

e. Multiple Event Logging. There may be opportunities for crewmembers to accomplish the requirements of more than one event during a scheduled training evolution. Units are encouraged to take advantage of complex training opportunities that allow multiple event completion. Under all circumstances, post-event logging (single or multiple) is allowable if the requirements for each event are accomplished per the performance standard.

3. Event Proficiency. Individuals must demonstrate proficiency in the performance standard of specific events. Event proficiency refers to how recently an individual has demonstrated proficiency in an event in relation to the event's refly factor. Proficiency dates for each event code shall be maintained for crewmembers. Event proficiency is calculated and tracked using M-SHARP.

a. Refly Factor. Refly factor establishes the maximum time between syllabus events. Specified T&R events have a refly interval, measured in number of days that indicate the period within which the event must be reflown or updated. Events that have no refly interval have a one-time training requirement and are noted by an asterisk (*) in the events themselves and in the refly column of the syllabus matrix.

b. Event Proficiency Status. Proficiency is a measure of achievement of a specific skill. Refly factors establish the maximum time between demonstration of those skills. The proficiency status for a given individual and T&R event is either Proficient, Delinquent, Never Been Attempted (NBA), or Incomplete. Note that proficiency of an event can determine the proficiency status of an individual.

(1) Proficient Status - An individual successfully performed or updated an event within the refly interval (e.g. successfully completed and logged event into M-SHARP). For example, the refly for event EXT-2210 is 365 days and an individual successfully performed EXT-2210 60 days ago. That individual has a *proficient* status for that event and remains proficient for the next 305 days.

(2) Delinquent Status - An individual previously completed the event but has exceeded the refly interval for that event without executing/updating it. If an individual exceeds the refly factor for a particular event, the individual loses proficiency in that particular event. To continue with the example above, if the individual does not perform EXT-2210 (event is not updated) in the next 365 days, the proficiency status for EXT-2210 will become delinquent.

(3) Never Been Attempted (NBA) Status - indicates an individual has never attempted to complete the event.

(4) Incomplete Status - An individual was scheduled and attempted to complete the event but did not complete all event requirements.

(5) An individual's proficiency date for an event is the most recent date that event was completed/updated. Expiration date for an event is the day after the refly interval expires for that event. An event must be scheduled for recompletion or updating prior to the expiration date; the date scheduled for training is called the reference date. To ensure the event does not become delinquent, the reference date must be accomplished prior to the expiration date.

c. Event Proficiency Updating. Event proficiency dates shall be updated when an event is (event proficiency updating applies to 2000+ phase events):

(1) Re-demonstrated proficiently (Re-demonstrating proficiency in the event is defined as the successful execution of the performance standard for that event).

(2) Updated via chaining.

(3) Updated via POI updating.

(4) Waived.

(5) Deferred.

d. Chaining. When a T&R event is logged, the proficiency dates of other T&R events may be updated. Event chaining allows for more complex and/or advanced events to update proficiency status of "lower" events that use the same skills as the complex event. When a T&R event is logged, the proficiency dates of other T&R events may be updated. The T&R code that is logged is known as the "chaining code," and the updated codes are "chained codes." Chained codes are not always updated when a chaining code is logged. Specific rules determine which events may be updated via conditional and/or recursive chaining (see Chapter 6).

(1) Chaining Guidance

(a) During a community T&R conference, SMEs will identify events that chain other events with equivalent skills by noting them in the T&R syllabus matrix; those chained events may be updated.

(b) Only those events that are proficient are updated via chaining.

(c) Delinquent, NBA, or Incomplete events shall not be updated in chaining.

(d) Chaining rules always apply regardless of the POI.

(2) Chaining Considerations

(a) All aspects of an event should be considered when determining chaining. Event conditions, type and number of devices, requirements, performance standards, ordnance requirements, etc., must all be considered when determining equivalent skills and subsequent chaining.

(b) Communities should be careful not to 'over' or 'under' chain T&R events. A single event should not chain a large number of syllabus events unless such a chaining event specifies equivalent skill requirements in all of the chained events.

206. T&R EVENT EVALUATION. Standardized evaluation procedures provide commanders with an effective management tool to improve training and monitor personnel progress.

1. Event Evaluation Forms. Communities shall develop evaluation forms for all events contained in their T&R syllabus. Evaluation forms shall be used for events in each phase of training by instructors and evaluators to measure the accomplishment of training goals. These evaluation forms shall be placed in T&R manuals as an appendix or shall be maintained by the syllabus sponsor.

a. If maintained by the syllabus sponsor, the forms shall be kept electronically and shall be made available to the Marine Corps Total Force. Eventually, Electronic Aviation Training Forms (EATF) will be standardized and used by all T/M/S and the FRSS. With direction of DC AVN, TECOM ATD, in concert with MAWTS-1, shall provide oversight for the development and incorporation of EATFs. These EATFs will provide standardized feedback to the individual being trained and to the training system.

b. Communities using T&R manuals for MOSs 59XX and 72XX shall use the MACCS Training Form per the MAWTS-1 C3 Course Catalog, form is available for download at <https://www.intranet.tecom.usmc.mil/sites/mawts1/default.aspx>.

2. Events shall be documented per the following instances:

a. Completion of events flown for the first time (initial 'X'), even if assigned to a Refresher or similar POI, shall be documented with a T&R evaluation form as follows:

(1) All individuals assigned or re-assigned to a POI undergoing Core Skill Introduction, Core Skill Basic, Mission Skill, Core/Mission Plus phases (1000-4000 phase event codes). This shall include all crewmembers initially assigned to the

Basic POI or re-assigned to the Refresher, Modified Refresher, Safe-for-Solo, Transition, and Series Conversion POIs.

(2) All individuals undergoing Instructor Training (5000 phase event codes). This includes all work-up and evaluation events contained within the T&R, MAWTS-1 Course Catalog, or as required by other governing directives.

(3) All individuals undergoing designation training to include work-up and evaluation events for Combat Leadership designations.

b. E-Coded Events. A special event code that is normally used for NATOPS and Instrument Evaluations that require an evaluation form upon execution of every occurrence. However, more frequent documentation may be mandated for other events at the discretion of a community. For example, this could include documentation of Combat Leadership requirements at specific intervals or the employment of selected ordnance and unique occurrences as determined by the syllabus sponsor.

c. Any event where performance was evaluated as "unsatisfactory."

d. For Aviation Ground Units - where the Performance Standard requires evaluation, the trainee must meet the requirement by 80 percent or better. If the trainee is graded it is an evaluated event and therefore E-Coded for Aviation Ground Units.

3. Completed event evaluation forms shall be maintained in Performance Records (PR) and Aircrew Performance Records (APR) or electronic training jackets.

4. Evaluation documentation for NATOPS and Instrument check events are governed by the OPNAV 3710 series. Normally these events are considered as E-coded.

207. SIMULATOR POLICY

1. All T&R manuals shall maximize the use of simulation in the T&R development/review process. Particular emphasis should be placed upon the capabilities and/or limitations of a community's simulation capability in the selection of the device utilized to execute/complete an event. If the community possesses a simulator with the capability of executing the goal and requirement of an event as well as the means of evaluating the performance standard, then it shall be conducted in the simulator or, at a minimum, be listed as simulator preferred (see Chapter 6 for device coding). In order to exploit emerging capabilities, network training capabilities should be considered for inclusion in T&R manuals.

2. To the maximum extent possible, annual instrument and NATOPS evaluations shall be completed in the simulator under the supervision of an appropriately designated evaluator.

3. Motion systems may significantly enhance training. Allocation of full motion simulators may be considered for the Core Skill Introduction phase due to the fundamental nature of this training.

4. Events designated as training device preferred may be conducted on the operational system only if the training device is not available.

5. Training device event briefs shall be identical, both procedurally and in content, to aircraft/operational system event briefs. The length of the brief should be based upon the event to be conducted and content to be covered.

6. Community T&R Manuals shall delineate maximum intervals between prerequisite events conducted in training devices and events conducted in aircraft/operational systems. This interval shall be no greater than the re-fly interval for the primary event.

7. Each community that employs training devices shall develop a Training Device Event Essential Subsystem Matrix (EESM). The purpose of the EESM is to link specific sub-systems to support of T&R achievement, and demonstrate how their absence prevents attainment of unit core competency. See Chapter 6 for EESM application.

a. T&R events that require the use of a training device shall only be scheduled in devices that are equipped with all mandatory subsystems per the EESM. For each event, a training device is categorized as follows:

(1) Event Capable (EC). A training device is EC for a T&R event if all mandatory subsystems are installed and operational.

(2) Non-Event Capable (NEC). A training device is NEC for a T&R event if any one of the mandatory subsystems is not installed or non-operational. In addition, if more than 5 or more than 50% of preferred subsystems are not installed or operational the device is NEC for that T&R event. A training device will be considered NEC for all events if its configuration is greater than 6 months out of date as compared to the majority of the current operational systems at the primary location supported by the training device.

b. The MAW Commanding General shall notify HQMC DC AVN [Info CG TECOM ATD and the procurement agency (e.g. NAVAIR and/or MARCORSYSCOM)] by AMHS message (via the applicable chain of command) when aware that training devices will be NEC for greater than six months due to operational system configuration changes, or when, in the Commanding General's judgment, the configuration of the training device has had an adverse effect on the wing's ability to train.

208. ACADEMIC/GROUND TRAINING

1. Each unit shall conduct specific training that complements the respective training syllabus. Personnel shall complete prerequisite supplemental courses of instruction prior to event training as outlined in community T&Rs.

2. The MAWTS-1 Course Catalog, MAWTS-1 C3 Course Catalog and other formal schools training catalogs contain detailed academic instruction designed to facilitate T&R progression.

3. Academic training shall be used to support individual and unit training requirements. Courses shall be provided in:

a. Technical Subjects. Includes, but is not limited to, aircraft/weapon systems, maintenance systems, ordnance, and organic unit equipment operation and maintenance.

b. Tactical Subjects. Includes, but is not limited to, policies, tactical and doctrinal manuals, ANTTs, NWPs, Chemical, Biological, Radiological and Nuclear (CBRN) defense, ordnance delivery/effectiveness, weapons platform/effectiveness, mission planning and briefing.

c. Instrument Flight, Federal Aviation Regulations and Navigation. This includes special equipment, computers, FLIP publications, OPNAV instructions, DR navigation, map reading, published local course rules and Instrument Ground School.

209. AVIATION CAREER PROGRESSION MODEL (ACPM)

1. ACPM is a banner under which all the training requirements are contained that Marine Aviation executes to prepare Aviation Combat Elements (ACE) to employ forces in operational environments. The ACPM training progression model is divided into two phases.
2. The training continuum for Phase I consists of two distinct individual training POIs; one tailored for aviators and the other for Marine AC2 personnel.
3. Building on the foundation of Phase I training, Phase II provides training as follows:
 - a. ACE Battlestaff T&R Manual. Provides training for the ACE commander, for individual battlestaff positions, and collective battlestaff employment.
 - b. Commanders and Prospective Commanders are required to attend the MAWTS Commanders Course and the MEU ACE Commanders Course.
 - c. Operations Officer Training Course. Provides training for prospective and current operations officers at the squadron and MAG/MACG/MWSG level.

210. ACPM PHASE I

1. Purpose

- a. Aviators. To enhance professional understanding of Marine Aviation and the MAGTF and to ensure aviators possess the requisite skills to fill battle command and battle staff positions in support of the ACE and the MAGTF in a joint environment.
- b. Marine Aviation Command and Control (AC2). To enhance professional understanding of Marine Aviation and the MAGTF and to provide MOS 72XX/7314/59XX personnel with a knowledge of doctrine and Tactics, Techniques and Procedures (TTPs) of aviation command and control. The AC2 ACPM is designed to guide Marines in reading and understanding doctrinal publications that outline aviation command and control. The ACPM is subdivided into five stages: MACCS, ACE, Threat, MAGTF, and Joint Air Operations. The requirements for completing each stage are outlined in MACCS agency T&R manuals. The content of the MACCS ACPM is maintained in the MAWTS-1 C3 Course Catalog.

2. ACPM Program

- a. Integration. T&R syllabus sponsors shall ensure all ACPM training requirements are properly integrated into each T&R manual. This process will occur at a minimum during the conduct of a T&R conference or as new ACPM training requirements evolve through the T&R manual change process.

(1) Flying Squadrons ACPM

(a) Academic training requirements will be embedded in all aviation T&R manuals within the progressive training Phases to include the 2000, 3000 and 6000 phases of training. Commanding officers shall ensure the requisite ACPM training requirements have been met prior to designating flight leaders.

(b) Chapter 6 provides direction on specific ACPM training requirements and how courseware is to be embedded within training phases.

(2) Marine AC2 ACPM

(a) The ACPM augments academic training requirements and thus shall be embedded in all AC2 and UAS agency T&R manuals as prerequisites to certifications, qualifications or designations. The Marine AC2 communities shall implement the AC2 ACPM program per paragraph 212.3 below and the MAWTS-1 C3 Course Catalog.

(b) All MOS 72XX/7314/59XX personnel assigned to the operating forces shall complete ACPM training requirements as proscribed in the applicable community T&R manual and the MAWTS-1 C3 Course Catalog. VMU exceptions: 75XX officers assigned to a VMU shall follow their flying squadron ACPM requirements per their primary MOS T&R manual.

b. ACPM Training

(1) Commanding officers shall ensure requisite ACPM training requirements have been met prior to approving certifications, qualifications or designations for which ACPM is a prerequisite.

(2) ACPM training will be tracked and managed in M-SHARP.

c. ACPM Content Review and Maintenance

(1) CG TECOM ATD will conduct an ACPM courseware content review on an annual basis, supported by T&R syllabus sponsors and Wing Flight Leadership Model Managers, as applicable. The purpose of the review is to:

(a) Evaluate courseware for currency, format, and content.

(b) Validate that the ACPM training modules are sufficient and courseware is appropriate.

(2) ACPM courseware is maintained and administered by MAWTS-1. CG TECOM ATD and Wing Flight Leadership Model Managers (as applicable) will coordinate with T&R syllabus sponsors at MAWTS-1 in the development of ACPM courseware to ensure it is current, relevant, and appropriate for each phase of training. The operating forces may request changes through the Training Management Team (TMT) process.

(3) MAWTS-1 C3 department will maintain a stage question bank for AC2 ACPM courseware on MarineNet: <https://www.marinenet.usmc.mil>

211. ACPM PHASE II. There are three components to ACPM Phase II; enhanced training requirements for commanders, ACE Battlestaff training, and the Operations Officer Training Course.

1. ACPM Phase II Commanders Training

a. Each MAG and T/M/S squadron commander shall attend the MAWTS-1 Commanders Course prior to or during their period of Command. MACG and respective squadron commanders are encouraged to attend.

b. Each squadron commander who is designated to be a MEU ACE commander shall attend the MAWTS-1 MEU ACE Commanders Course prior to assuming command or during their period of command.

2. ACE Command Training. The mission of the ACE Headquarters is to support the MAGTF commander by planning, executing, and assessing aviation operations during expeditionary, joint or combined operations. To ensure that MAWs and MAGs maintain the capability to employ the ACE at the MEB and MEF level, each MAW and MAG shall

exercise ACE Command training once every two years in accordance with the ACE Battlestaff T&R Manual.

3. Operations Officer Training Course. It is vital to have standardized training for Operations Officers that prepares them for one of the most important billets in their unit. Operations Officers at the Squadron and Group level must fully understand the requirements and directives that apply to the daily running and future planning of Squadron Operations. As such, Wings shall host a course that encompasses both USMC-wide requirements and specific procedures for local operations. TECOM ATD and HQMC Aviation will help maintain the standardized POI and its course material; the Wings will determine when it is appropriate to hold this training and provide the resources to execute it.

212. REQUIREMENT, CERTIFICATION, QUALIFICATION, AND DESIGNATION EXECUTION

1. Requirement. Requirements consist of numerous reoccurring and one-time events that are required by governing directives applicable to a community. These events may include academic events such as NATOPS Open and Closed Book Examinations, Instrument Ground School, and Instrument Exams. Other events include NATOPS and Instrument Evaluations, flight events, and tracking codes.

2. Certification. A certification refers to the evaluation process conducted via syllabus event(s) by a designated instructor or authorized personnel for the purpose of assessing individual skills as a prerequisite to qualification or designation. For aviation ground communities, a certification also serves as a "one-time" assessment of proficiency for a given skill or position that does not expire; specifics shall be noted in community T&Rs.

3. Qualifications. Qualifications are assigned to personnel based on demonstration of proficiency in a specific skill. All qualifications are assigned one or more T&R qualification events. When all qualification requirements and events are completed, the individual may be granted the respective qualification by the commanding officer or in the case of aviation ground communities, as directed in their respective T&R Manual. Proficiency status of these qualification events are used to determine qualification status; an individual qualification status may be either "Qualified" or "Not Qualified."

a. Loss of Qualifications. If an individual goes delinquent in all associated qualification events, the qualification is lost and the status automatically reverts to "Not Qualified." Individuals do not lose a qualification as a function of re-fly factor for individual events. Loss of proficiency resulting from being delinquent on all associated qualification events (events with measurable re-fly factor; excluding one-time events)** constitutes loss of that qualification.

b. Re-Qualification. Re-qualification requires demonstration of proficiency in a specific skill. To regain a lost qualification due to delinquency, the individual must re-complete all R-coded qualification events. Upon completion, the qualification status automatically reverts back to "Qualified." Normally qualifications regained in this manner require no additional documentation.

4. Designations. Designations are assigned to individuals based on leadership ability. Other publications may be referenced to delineate additional designation training criteria. When all designation training requirements are completed, the individual may be granted the respective designation by the commanding officer.

a. Loss of a Designation. Designations are command specific and remain in effect until removed for cause or the individual is transferred to another command.

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b. Re-Designation. Community T&Rs may stipulate re-designation criteria; if criteria are not delineated, re-designation is at the commanding officer's discretion.

5. Documentation. All individual certifications, qualifications and designations shall be documented in PRs and APRs.

a. Commanders (or a Designated Representative in Aviation Ground Units) shall issue certification, qualification or designation letters when individuals have completed the respective training requirements.

b. Only after the commanding officer has signed the respective letter and a copy is included in section 4 of the PR/APR will the individual be considered certified, qualified, or designated, as applicable.

c. Training officers should utilize training progression models as a baseline for scheduling individual certification, qualification and designation training.

213. FLIGHT LEADERSHIP

1. Flight Leadership Program Execution

a. The flight leadership program is governed by this Manual, executed through community T&R programs of instruction, and implemented under the oversight of Wing Commanding Generals.

b. Each Wing will be assigned as Model Manager for specific T/M/S aircraft as depicted below.

Model Manager	CH-46E	MV-22B	AH-1 UH-1	CH-53D	CH-53E	FA-18	AV-8B	EA-6B	KC-130T	KC-130J	F-35 TBD
1 st MAW				X						X	
2d MAW		X			X			X			
3d MAW	X		X			X	X				
4 th MAW									X		

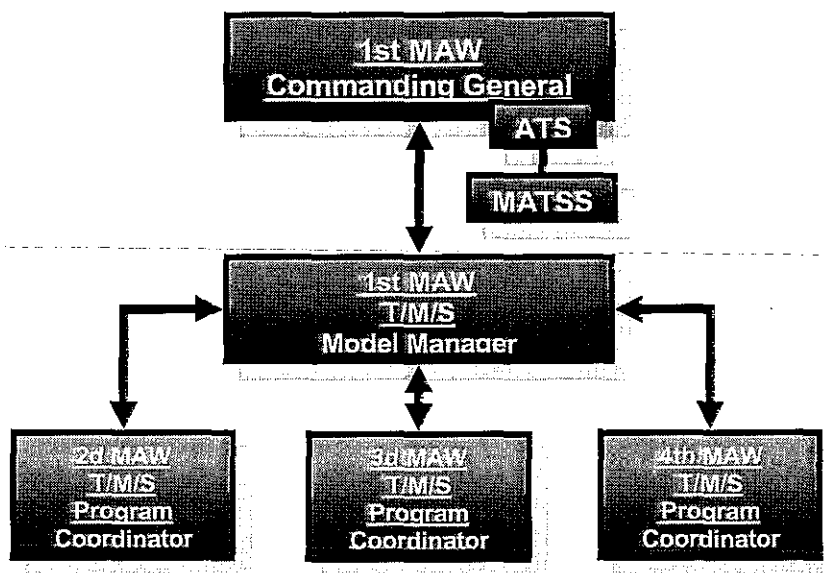
c. Wing Commanding Generals will designate a Flight Leadership Standardization Evaluator (FLSE) as a program coordinator for each T/M/S aircraft unit within the Wing.

d. Implementation and Support

(1) Each Marine Aircraft Wing's Aviation Training System (ATS) structure will support the MAW CG in implementing the flight leadership program. Marine Aviation Training System Sites (MATSS) will support improvements in the quality of flight leadership training, ensure standardization, and facilitate evaluation. Close cooperation between the operating forces and ATS entities is the foundation of the single integrated aviation training system envisioned for Marine Aviation.

(2) As MATSS infrastructure and staffing resources become available to support the FLP, Model Manager responsibilities for each T/M/S will be transferred to the appropriate MATSS site. This transfer will only be undertaken after the site achieves Full Operational Capability (FOC) as defined in NAVMC 3710.6.

(3) MARFOR CGs, Deputy Commandant for Aviation (APP and APW), and CG TECOM (ATD and MAWTS-1) shall support the Wing Commanding Generals in implementing the flight leadership program. A diagram depicting an example of flight leadership implementation and support structure is detailed below.



e. T/M/S Flight Leadership Model Manager. The T/M/S Model Manager is that Marine Aviator or NFO responsible for management of the flight leadership program across all Wings for a specific T/M/S. The T/M/S Model Manager shall ensure FLSE and flight leader standardization issues are addressed at the appropriate level and shall coordinate proposed changes per Chapter 5.

f. T/M/S Flight Leadership Program Coordinator. The MAW T/M/S Program Coordinator is an Aviator or NFO who is responsible for the management of the flight leadership program within their T/M/S for their respective Wing. MAW T/M/S Program Coordinators shall provide input to the T/M/S Model Manager on standardization issues and recommended changes to the program. The Program Coordinator is responsible for the certification of FLSEs of their particular aircraft types within their Wing. Additionally, the Program Coordinator is responsible for annual standardization training.

g. FLSE

(1) A MAG designated T/M/S FLSE is an Aviator or NFO responsible for implementing the community Flight Leadership POI at the unit level.

(2) MAWTS-1 instructors are authorized to perform FLSE functions as requested. MAWTS-1 will coordinate with FLSE Model Managers to ensure standardization.

(3) FLSEs provide input to the Program Coordinator/Model Manager on standardization issues and recommended changes to the program.

(4) The number of FLSEs should reflect the required number to accomplish effective MAG/squadron training and shall be strictly controlled by MAG commanding officers. As a guideline, MAG commanding officers should designate 2 FLSEs per squadron under his command (e.g., a MAG with 4 squadrons would typically designate 8 FLSEs within the MAG). This estimate should, in no way, limit MAG commanding officers from designating additional FLSEs. MAG commanders ultimately retain the flexibility to designate the number of FLSEs required for mission accomplishment.

(5) All FLSEs shall complete annual standardization training IAW the community T&R with one of the following individuals:

- (a) Model Manager/Program Coordinator (same T/M/S).
- (b) FLSE inside the MAW (same T/M/S).
- (c) FLSE outside the Wing (to be funded by the requesting unit).

(6) Flight Leadership Standardization Evaluator POI

(a) Flight communities are required to implement a FLSE POI. Prospective FLSEs shall complete the respective community FLSE POI delineated in the community T&R as a prerequisite to FLSE designation.

(b) FLSE POIs shall be delineated in the 5000 phase of each respective T/M/S community T&R Manual.

(c) Community T&R Manuals shall delineate the requirements and standards for conduct of annual FLSE standardization training.

(7) FLSEs may evaluate any T&R event, in addition to those associated with Flight Leadership POIs, providing additive flexibility to squadron Operations and Training departments.

2. Flight Leadership POIs

a. Flight communities shall implement standardized flight leadership POIs for the following designations: Section Leader, Division Leader, Flight Leader, Mission Commander/Air Mission Commander, and Refueling Area Commander. Prospective Flight Leads are required to successfully complete all events in the community flight leadership POI as a prerequisite to the respective flight leadership designation. Upon successful completion of the POI, the prospective Flight Lead may be designated in writing by the unit commanding officer.

b. Flight Leadership POIs shall be delineated in the 6000 phase of each respective T/M/S community T&R Manual.

c. Aviators shall log the respective flight leadership proficiency tracking code when they lead a flight.

d. Communities with approved multi-simulator tactical environment networked virtual training systems shall maximize the use of these simulators for conducting FLSE training and flight leadership T&R events.

e. Flight Leadership standards for POI development are contained in Appendix F.

(1) POI Content. Flight leadership POIs shall ensure aircrew are trained and evaluated in the skills and missions that the aircrew will be expected to lead once designated.

(2) Flight leadership POIs shall be delineated in the 6000 Phase.

(3) Flight leadership POIs shall include both skill-based and MET-based events. These events shall encompass the conditions that are specified in each community Core METL.

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(4) Flight leadership POIs shall specify appropriate administrative and tactical flight leader requirements as stated in SOPs (e.g., NORDO approach, system malfunctions, non-standard departures/recoveries, etc.).

(5) Community flight leadership POIs shall delineate academic requirements that include self-paced readings, chalk talks, and lectures applicable to the respective flight leadership designation. Flight leader academic requirements should include the following:

- (a) Flight lead mission planning considerations.
- (b) Flight leader application of TTPs.
- (c) Operational Risk Management (ORM) and Crew Resource Management (CRM).
- (d) Standard Operating Procedures (SOPs).
- (e) Aviation Career Progression Model (ACPM) training requirements.

(6) Simulator training shall be incorporated into the flight leadership POIs to the maximum extent practical. Simulator training requirements vary among aviation units based on simulator capabilities, physical location, and training needs. Flight leadership POIs shall include simulator training requirements that reflect current simulator facility capabilities and training goals.

(7) Flight leadership POIs shall delineate prerequisites appropriate to the respective Flight Leadership designation. Flight leadership prerequisites shall state whether the requirement applies to commencement of the flight leadership POI, certification event or designation.

(8) At a minimum, prerequisites must ensure that the prospective flight lead has demonstrated proficiency in all events that he could be expected to lead.

(9) Communities shall delineate appropriate qualification and designation prerequisites.

(10) Completion of 2000 and 3000 phases shall be a prerequisite to commencing the Section Leader POI. Exceptions shall be delineated in the community Section Lead POI.

(11) Community Aircraft Commander designations shall be a prerequisite to commencing the Section Leader POI.

(12) The last event performed in each T&R flight leader POI shall be a flight event:

(13) Communities shall establish flight leadership tracking codes in the 6000 phase which are intended to be used as a tool for ORM and training management purposes.

(14) Communities shall R-code POI events required to regain flight leadership proficiency.

(15) Community flight leadership POI event requirement and performance standard descriptions shall be commensurate with flight leadership criteria. Flight event descriptions shall include event requirement accomplishment criteria

to determine whether the prospective flight lead completed the event. The prospective flight lead shall use the performance standards to debrief the flight. The following shall be considered when developing flight leadership POI event Requirement and Performance Standard descriptions:

(a) Flight Leadership (FL) Requirements

- 1 Plan, brief, lead, and debrief events.
- 2 Understand the community T&R and aviation T&R Program Manuals and execute T&R policy.
- 3 Incorporate ORM and CRM in all levels of training.

(b) FL Performance Standards

- 1 Maintain situational awareness.
- 2 Make sound administrative and tactical decisions.
- 3 Safely lead and control aircraft within flight.
- 4 Adhere to Standard Operating Procedures (SOPs).
- 5 Demonstrate sound tactical execution.
- 6 Respond to unplanned circumstances.
- 7 Communicate intentions to the flight.
- 8 Accurately recall/reconstruct event and debrief learning points.

3. Flight Leadership Evaluations

a. FLSE from a different unit shall evaluate the required number (minimum of 1) of flight leadership POI events as specified in each community POI. Flight leadership POI events evaluated by a FLSE where performance is evaluated as 'unsatisfactory' must be rescheduled and successfully completed with a FLSE.

b. Fixed Wing Evaluation Requirements. Individuals evaluating a prospective flight lead during flight leadership POI events should normally be of the same crew position and community for the prospective flight lead. Mission Commander evaluations, and others as specified within each community, may be conducted by a pilot or NFO of the same community. The following designations are required in order to evaluate prospective FW flight leads (unless otherwise stated in the community POI):

<u>Prospective Flight Lead</u>	<u>Minimum Qualification to Evaluate</u>
Section Leader	Division Leader (Section Lead EA-6B)
Division Leader	Mission Commander (Division Lead EA-6B, KC-130)
Refueling Area Commander	Refueling Area Commander
Mission Commander	Mission Commander

c. Rotary Wing and Tiltrotor Flight Leadership Evaluation Requirements. Individuals evaluating a prospective flight lead during flight leadership POI

events should normally be of the same crew position and community for the prospective flight lead. Air Mission Commander evaluations and others, as specified within each community, may be conducted by a pilot of another Model/Series community. For example, a CH-46E AMC may evaluate a prospective CH-53 AMC. The following designations are required in order to evaluate prospective flight leads (unless otherwise stated in the community POI). Rotary Wing and Tiltrotor Air Mission Commanders (AMC) may be certified by FLSEs from different Assault Support models.

Prospective Flight Lead	Minimum Qualification to Evaluate
Section Leader	Division Leader
Division Leader	Flight Leader
Flight Leader	Flight Leader
Air Mission Commander	Air Mission Commander

d. FLSE certification of prospective flight leaders for deployed units or locations where a FLSE from a different unit is not available to conduct the certification may be conducted by an internal FLSE with a minimum of MAG/MAGTF Commander level of approval.

4. Flight Leadership Re-Designation

a. Flight Leadership Re-Designation. Flight leadership re-designation criteria for aircrew that do not require Core Skill Introduction Refresher training is at the discretion of the commanding officer. For aircrew that require Core Skill Introduction Refresher Training per paragraph 405, the minimum re-designation requirement for flight leader positions is successful completion of the R-coded flight leader POI events.

b. Flight Leadership Standardization Evaluator Re-Designation. FLSE re-designation criteria for aircrew that do not require Core Skill Introduction Refresher training is at the discretion of the MAG CO. For aircrew that require Core Skill Introduction Refresher Training per paragraph 405, the minimum re-designation requirement for FLSE positions is successful completion of the associated T&R FLSE POI.

214. NATOPS PROGRAM (Applies to flying squadrons including VMUs)

1. The purpose of the NATOPS Program (OPNAVINST 3710.7 Series) is to increase combat readiness, improve flight safety, and standardize the conduct of evaluations. This program ensures enterprise-wide standardization for Marine Aviation.

2. NATOPS Program Oversight. Specific guidance is delineated in OPNAV 3710.7, the USMC NATOPS Order, and this Manual for Marine Aviation. Oversight is provided by the Wing Commanding Generals in concurrence with the Commanders of Marine Forces (COMMARFORs).

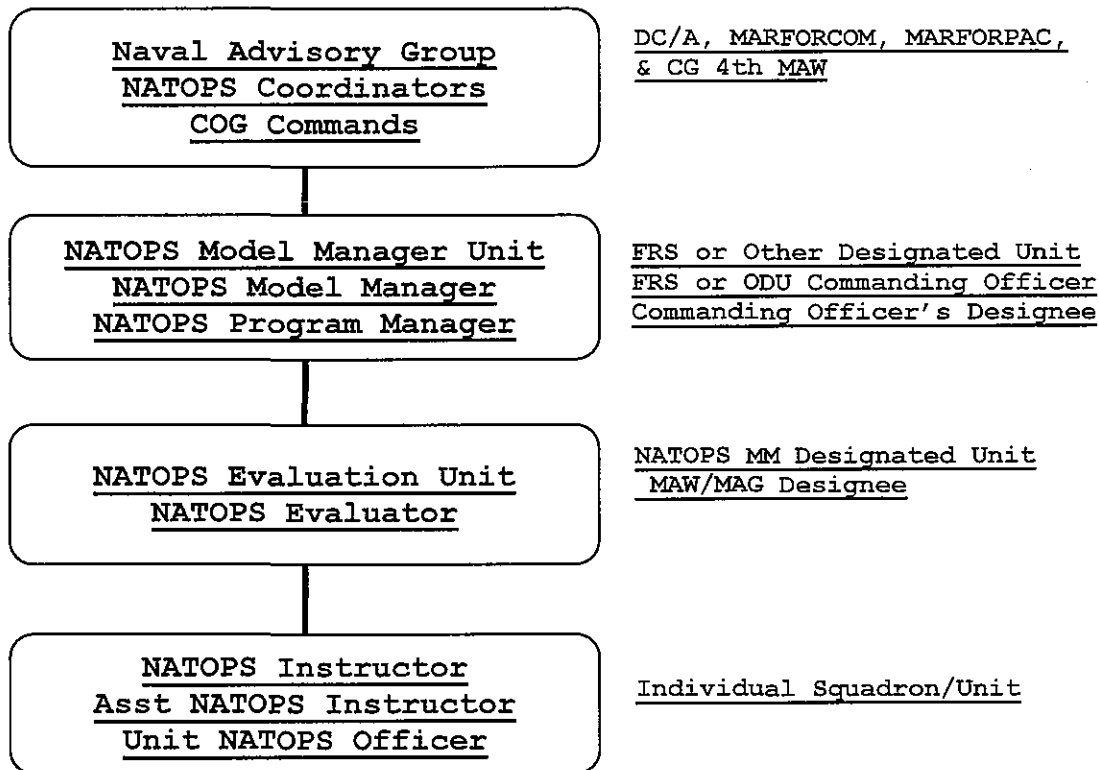
3. Duties and Responsibilities. The duties of the Naval Advisory Group (NAG), Cognizant (COG) Command, NATOPS Coordinator (NC), NATOPS Model Manager, NATOPS Program Manager, NATOPS Evaluation Unit, NATOPS Evaluator, NATOPS Instructor, Assistant NATOPS Instructor and Unit NATOPS Officer are clearly defined within OPNAVINST 3710.7 Series and other USMC directives, instructions, and orders.

4. Implementation and Support

a. Each Wing Aviation Training System (ATS) will support the MAW CG in implementing the NATOPS and Instrument programs.

b. As ATS matures and MATSS infrastructure becomes available, NATOPS Model Managers should utilize these resources to assist in facilitating the accomplishment of their duties and responsibilities.

c. DC AVN (APP, APW, APX, and ASM), CG MARFORCOM, CG MARFORPAC, and CG TECOM ATD shall support MAW CGs in implementing standardized NATOPS and Instrument programs. A diagram depicting an example of NATOPS implementation and support structure is detailed below.



5. NATOPS Evaluation. All NATOPS evaluations shall be conducted IAW OPNAVINST 3710.7 Series, NATOPS flight manuals, and other applicable directives, instructions and orders.

a. NATOPS. NATOPS evaluations measure an individual's procedural understanding, airmanship, systems knowledge, situational awareness, and judgment. These evaluations reflect the degree of compliance and health of the NATOPS program within a unit. The following define the events which comprise the NATOPS evaluation.

(1) Academic Evaluation Events

(a) Monthly Emergency Procedures Examination (30-day interval).

(b) Emergency Procedures Simulator/Cockpit-Cabin Drill (90-day interval).

(2) Dynamic Evaluation Events

- (a) Annual NATOPS Open Book Examination (IAW OPNAV 3710 requirements).
- (b) Annual NATOPS Closed Book Examination (IAW OPNAV 3710 requirements).
- (c) Annual NATOPS Oral Examination (IAW OPNAV 3710 requirements).
- (d) Annual NATOPS Evaluation Event (IAW OPNAV 3710 requirements).

NOTE

At the discretion of the squadron or unit commanding officer, a failure of an academic/dynamic evaluation event may ground/restrict the evaluatee from flying/flight operations until a grade of "Qualified" is achieved on all evaluation events.

b. Failures. The intent is to shift the fleet from a "Zero Defect" mentality of no failures, to a stringent objective appraisal of aeronautical capabilities, knowledge, skills and temperament.

(1) Evaluatees who receive a grade of Unqualified on their initial annual ground or flight evaluation shall be allowed 30-days to complete the reevaluation with no administrative action required.

(2) The evaluatee shall be provided a reasonable opportunity to correct deficiencies prior to reevaluation. At the discretion of the unit commanding officer, the reevaluation event need only consist of those areas/subareas in which the grade of unqualified was assigned.

(3) Disposition of the evaluatee who fails the reevaluation shall be in accordance with applicable directives, instructions and orders (NATOPS and the ACTS Manual).

c. NATOPS Evaluation Time Limitations

Event	Time Limit
Open Book NATOPS Examination	60-Days from receipt of examination
Closed Book NATOPS Examination	60-Minutes from receipt of examination
Oral NATOPS Examination	Not to Exceed 3 Hours
NATOPS Evaluation Event (Simulator/Aircraft)	Not to exceed 3 Hours

(1) 60-Day Limit

(a) Individuals have a maximum of 60-days to complete the NATOPS evaluation process, which commences upon receipt of the open Book examination.

(b) Aircrew who exceed the 60-day window must retake the Open Book examination to reset the clock.

(2) Failures

(a) Failure of any portion of the NATOPS evaluation shall initiate the 30-day reevaluation period.

(b) The initial 60 day clock still remains in effect.

d. Tactical Units. All tactical units shall utilize the Model Manager developed products in the execution of the NATOPS program.

e. OSA Units. All OSA units shall utilize the Model Manager developed/approved products and their respective T&R POI in the execution of the NATOPS program.

f. Commanding Officers. The responsibility for an effective NATOPS program in a squadron/detachment/unit rests with the commanding officer. NATOPS manuals and NATOPS flight manuals are effective tools to achieve standardization and training goals. Leadership is the key element in the enforcement of those standards.

g. NATOPS Tracking/MSHARP Integration. NATOPS tracking and MSHARP integration are necessary to ensure accountability and compliance.

6. NATOPS Standardization Board. (Minimum membership requirements):

- a. Executive officer.
- b. Director of Safety and Standardization (DSS).
- c. Operations Officer.
- d. Aviation Safety Officer (ASO).
- e. NATOPS Instructor/Officer.
- f. NATOPS EAC Instructor/SNCO (For review of Enlisted Aircrew (EAC)).

7. TACAIR Annual Out Of Control Flight (OOCF) Simulator Syllabus. All TACAIR aircrew shall conduct annual OOCF simulator syllabus utilizing the MAG standard OOCF profile.

8. NATOPS Standardization. To ensure NATOPS Program standardization the NATOPS Model Managers shall have the following additional duties:

a. Maintain a master library of appropriate NATOPS publications; be thoroughly knowledgeable of their contents, and other associated instructions. This library may be maintained in a digital format by downloading applicable NATOPS publications and changes from the Naval Air Technical Data and Engineering Service Command (NATEC) official web site <https://airworthiness.navair.navy.mil>.

b. Write comprehensive NATOPS examinations both open and closed book from the maintained question data bank, to be administered on a scheduled and unscheduled basis.

c. Prepare and maintain comprehensive NATOPS oral examination, to evaluate the airman's knowledge of aircraft systems, performance limitations, emergency procedures, Operational Risk Management (ORM), Crew Resource Management (CRM), and flight/ground operations and knowledge.

d. When compliance with any prescribed NATOPS procedure is found to be impractical or it is desired that a new procedure be initiated, act as the focal point for the T/M/S community to ensure a request for waiver is provided per OPNAVINST 3710.7 Series.

e. Develop a comprehensive NATOPS Evaluation Aviation Training Form (ATF) for monthly emergency procedures exam and quarterly simulator/cockpit-cabin drills, and for the evaluation flight/event. An example format is included in Appendix F.

f. Ensure that all flight personnel complete a monthly emergency procedures written examination and a quarterly emergency procedures simulator review. If a simulator/training device is not available, a comprehensive cockpit/cabin drill shall be substituted. The results of the monthly emergency procedures examination and quarterly emergency simulator review (cockpit/cabin drill) will be annotated on the appropriate ATF and may be maintained in the individual's Aircrew Performance Record (APR) or other appropriate location. These exams/reviews shall be retained for one year based on each aircrew's annual NATOPS evaluation. At the discretion of the squadron and/or unit commanding officer, dependent upon combat operations/deployed operational tempo, these requirements may be waived. This is not to be construed as an opportunity to execute a blanket waiver for the entire deployment. The intent is to provide the commanding officer a tool in which to waive this requirement during those segments of the deployment until such time as assets and mission requirements permit.

g. Takeoff, landing, and emergency procedures are considered the minimum areas which NATOPS Model Managers are directed to consider NATOPS evaluation platform critical areas and sub areas, if not already identified in their respective platform NATOPS manuals.

h. NATOPS Model Managers shall collaborate with their respective community representatives to define:

- (1) Applicable metrics and standards for all flight maneuvers.
- (2) Momentary deviation limits from standard operating procedures (provided such deviations do not jeopardize flight safety).
- (3) Metrics for momentary deviations time limits.
 - (a) Detection by the evaluatee.
 - (b) Corrective action by the evaluatee.

NOTE

Ensure that all deviations and corrective actions do not jeopardize flight safety.

i. USMC simulators/training devices are continually upgraded to provide the fidelity and capability to execute efficient and effective NATOPS evaluations. It is incumbent upon the NATOPS Model Manager to determine if the simulator/training devices adequately satisfy the minimum requirements to execute NATOPS evaluations. NATOPS evaluation events in Model Manager designated simulators/training devices should be utilized to the maximum extent possible. Simulator/training devices facilitate the objective scrutiny of Crew resource Management (CRM), Emergency Procedures, basic and emergency flight operations, procedural and systems knowledge while providing the playback/recording capability to enhance the debrief.

215. NATOPS INSTRUMENT PROGRAM

1. NATOPS Instrument Training/Evaluations. All NATOPS instrument flight/event training shall be conducted IAW OPNAVINST 3710.7 Series, NAVAIR 00-80T-112, Federal Aviation Regulations/Airman's Information Manual (FAR/AIM), and other applicable

directives, instructions and orders. The following criteria define the events which comprise the NATOPS instrument evaluation.

a. Academic Evaluation Events. Annual NATOPS Instrument Open Book Examination (IAW with OPNAV 3710 requirements).

b. Dynamic Evaluation Events

(1) Annual NATOPS Instrument Oral Examination (IAW with OPNAV 3710 requirements).

(2) Annual NATOPS Instrument Ground School (IAW with OPNAV 3710 requirements).

(3) Annual NATOPS Evaluation Event (IAW with OPNAV 3710 requirements).

NOTE

At the discretion of the squadron or unit commanding officer, a failure of an academic/dynamic evaluation event may restrict the evaluatee from flying/flight operations until a grade of "Qualified" is achieved on all evaluation events.

2. NATOPS instrument evaluations assist commanding officers in maintaining a high level of all-weather flying proficiency within their unit. NATOPS instrument evaluations are intended to evaluate the pilot's knowledge and application of procedures and techniques during flight operations in instrument weather conditions (NAVAIR 00-80T-112).

a. All areas on the instrument flight evaluation are critical.

b. Since all areas of the instrument flight evaluation are critical, the reevaluation event must be completed in its entirety.

c. Evaluatees who receive a grade of "Unqualified" on their initial annual ground or flight evaluation shall be allowed 30 days in which to complete the reevaluation with no administrative action required.

d. Individual is provided a reasonable opportunity to correct such deficiencies.

e. Disposition of the Evaluatee who fails the reevaluation shall be in accordance with applicable directives, instructions and orders (NATOPS and the ACTS Manual).

3. Failures. The intent is to shift the fleet from a "Zero Defect" mentality of no failures, to a stringent objective appraisal of aeronautical capabilities, knowledge, skills and temperament.

4. Fleet Units. All fleet units shall utilize the approved IGS Model Manager and platform Model Manager developed products in the execution of the NATOPS Instrument program.

5. OSA Units. All OSA units shall utilize the Model Manager developed/approved products and their respective T&R POI in the execution of the NATOPS instrument program.

6. NATOPS Instrument Tracking/MSHARP Integration. NATOPS Instrument tracking and MSHARP integration is necessary to ensure accountability and compliance.

7. Instrument Flight Board. Each squadron or unit shall establish an instrument flight board composed of designated military aviators, NFOs, and designated civilian instrument instructors as applicable. It shall be the function of those boards to conduct instrument evaluations of Naval Aviators/NFOs and civilian instrument evaluators, in accordance with the provisions of this Manual. It is desired, when possible, that members of instrument flight boards hold a special instrument rating.

8. NATOPS Instrument Standardization. To ensure NATOPS Instrument Program standardization, NATOPS Model Managers shall have the following additional duties:

a. Maintain a master library of appropriate NATOPS instrument publications; be thoroughly knowledgeable of their contents, and other associated instructions. This library may be maintained in a digital format by downloading applicable NATOPS instrument publications and changes from the Naval Air Technical Data and Engineering Service Command (NATEC) official web site <https://airworthiness.navair.navy.mil>.

b. Liaison with the Instrument Ground School (IGS) Coordinator at MATSS New River for utilization of the IGS Model Manager (CNATRA) approved academic courses of instruction to include open book and/or closed book examinations.

c. Develop a comprehensive NATOPS Instrument Aviation Training Form (ATF) for the evaluation flight/event. A template of the desired format is included in this Manual to assist in development efforts.

d. NATOPS Model Managers shall, in conjunction with their respective community representatives, develop NATOPS Instrument Performance Standards to include:

(1) Applicable metrics and standards for all flight maneuvers.

(2) Momentary deviation limits from standard operating procedures (provided such deviations do not jeopardize flight safety).

(3) Defined metrics for the time limits for the momentary deviations.

(a) Detection by the evaluatee.

(b) Corrective action by the evaluatee.

e. Simulators. USMC simulators/training devices are continually upgraded to provide the fidelity and capability to execute efficient and effective NATOPS Instrument evaluations. It is incumbent upon the NATOPS Model Manager to determine if the simulator/training devices adequately satisfy the minimum requirements to execute NATOPS instrument evaluations. NATOPS instrument evaluation events in Model Manager designated simulators/training devices should be utilized to the maximum extent possible. Simulator/training devices facilitate the objective scrutiny of Crew resource Management (CRM), Emergency Procedures, basic and emergency flight operations, instrument flight procedures, procedural and systems knowledge while providing the playback/recording capability to enhance the debrief.

216. SYLLABUS TRAINING EXCEPTIONS

1. Definitions

a. Waiver. An event or prerequisite that is determined, in exceptional circumstances, to be exempt from a given POI for an individual and does not need to

be completed. If granted, the waiver that is approved is valid only for the POI that the individual is currently completing. Waivers shall remain in effect during the current tour of duty. Upon transfer the joining commander shall review waivers and make a determination upon the validity of previous waivers. If a waiver is validated a new waiver letter shall be issued and included in the PR/APR.

b. Deferral. Events may only be deferred when the lack of logistical support or training assets prevents timely event completion. For example, events may be deferred when a simulator/training device is not available, is non-mission capable, or it lacks the capability listed in the event description. Deferrals remain in effect for the refly interval or current tour of duty, whichever is less. Commanders may authorize the conduct of deferred simulator/simulated events in an aircraft/live.

2. Waiving or deferring syllabus events or prerequisites shall only be authorized by unit commanding officers. NATOPS and OPNAV requirements shall not be waived or deferred unless authorized by the respective publication. Core Skill Introduction (1000 phase) training event deferrals/waivers are contained in Chapter 4.

3. T&R Event Waivers

a. T&R Events may be waived for individuals undergoing the following training:

- (1) Transition
- (2) Series Conversion
- (3) Refresher POI

(4) For commanding officers who desire to waive multiple events, the following guidance applies:

(a) Individuals should complete all R-coded events for the given syllabus.

(b) Individuals shall complete the culminating R-coded event for the given syllabus.

(c) If no culminating R-coded event exists, then individuals shall complete the evaluation events for the given Stage, Core, Mission, or Core Plus skill, Certification, Qualification, Combat Leadership or Instructor Designation as applicable.

(d) Specific T&Rs and the MAWTS-1 Course Catalog have additional information.

b. T&R Event waivers shall not be granted for:

- (1) Any Basic POI event.
- (2) All events in a Stage.
- (3) All events in a Core Skill (2000 phase)
- (4) All events in a Mission Skill (3000 phase).
- (5) All events in Core Plus (4000 phase).

(6) All events in a One-Time Certification syllabus (aviation ground communities only).

(7) All events in a Qualification Syllabus.

(8) All events in a Combat Leadership Syllabus.

(9) All events in an Instructor Designation Syllabus.

(10) Any FLSE event, prerequisite, or standard.

c. Waived Prerequisites. Commanding officers may waive prerequisites that do not contradict the parameters listed above when the prerequisite waiver does not pose an unacceptable safety risk.

4. Logging of Waived or Deferred Events

a. The individual's proficiency date for that event shall be manually updated in M-SHARP.

b. The individual remains proficient throughout the respective event refly interval.

c. The refly date of the waived/deferred event may be updated through chaining.

d. The individual's proficiency date for that event shall be manually updated in the PR/APR or electronic training jacket.

217. DEVIATIONS FROM T&R PROGRAM MANUAL POLICY

1. CG TECOM ATD is the approval authority for deviations from Aviation T&R policy delineated in this Manual and individual aviation T&R manuals.

a. Requests for T&R policy deviation shall be requested via message to CG TECOM ATD via the operational chain of command (squadron/unit, MAG/MACG, MAW, MEF, MARFOR), with info notification to the syllabus sponsor. All requests must be endorsed by the applicable MARFOR. A sample message template is provided in paragraph 509.8.

b. For time-sensitive requests, chain of command endorsements may be obtained by phone conference. If this method is chosen, the requester shall ensure that the endorsement(s) obtained via phone are included in the message as references.

2. Example. A change to the T&R Program Manual mandates that all AV-8B NSQ sorties be flown with an NSI. However, the current version of the AV-8B T&R Manual at the time states that only 5 of the 9 NSQ sorties must be flown with an NSI. In this case, the AV-8B community requests and is granted a T&R deviation to continue Night Systems training in accordance with the current AV-8B T&R Manual until that community's T&R manual is updated.

3. Contingency/Combat Operations. During contingency/combat operations, MAGTF or wing commanders may deviate from Aviation T&R training policies at their discretion.

218. TRAINING AND PERFORMANCE RECORDS MANAGEMENT

1. Performance Records. Units shall maintain performance records for all assigned individuals undergoing aviation T&R syllabi training.

- a. Flight units shall utilize Aircrew Performance Record (APR) folders.
- b. Aviation Ground communities shall use Performance Records as prescribed by the individual communities in coordination with the syllabus sponsor.
- c. Performance records shall be audited and updated when:
 - (1) An individual initially reports to a unit.
 - (2) Annually within 30 days of birthday.
 - (3) An individual transfers from a unit. The transferring unit shall ensure the commanding officer (or authorized agent) signs the audit page certifying the performance records is complete and accurate.
- d. Performance records shall consist of a four-part folder with the following sections as outlined below:
 - (1) Section One - Administrative Information. This section shall contain:
 - (a) Privacy Act statement.
 - (b) Record of audit.
 - (c) Undergraduate Aviation Training information.
 - (d) Aviation related civilian education/training.
 - (e) Additional administrative information as appropriate.
 - (2) Section Two - Core Skill Introduction Training. For Marine Corps formal schools or joint training units, commanders shall ensure the performance records contain complete section 2 information prior to transferring the individual. When Core Skill Introduction events are not completed at a Marine Corps training unit, the receiving unit shall reconcile all those events with the applicable T&R syllabus. CG TECOM ATD directs commanding officers of the respective MATSG/Training Command's Marine Detachments to ensure the senior Marine instructor within the joint training unit completes the syllabus reconciliation form prior to transfer of the individual. This section shall contain:
 - (a) Core Skill Introduction Syllabus Evaluation Forms - shall be retained for 2 years.
 - (b) Summary Grade Sheet - after 2 years, the Core Skill Introduction syllabus evaluation forms shall be purged and only the summary grade sheet shall remain. This form shall contain a summary of the individual's event grades and/or comments on noted strengths and weaknesses observed during the Core Skill Introduction training and any deferred events. The summary grade sheet shall remain in this section permanently.
 - (3) Section Three - Squadron Training. This section shall contain:
 - (a) Syllabus Evaluation Forms. All syllabus training conducted at the operational unit shall be evaluated using these forms and must be retained until all training for that Core or Mission Skill has been completed. Syllabus evaluation forms shall be retained on a permanent basis to note performance trends.

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(b) Academic/Ground School Training. All required aviation academic/ground training completed and formal aviation academic/ground training courses completed shall be documented in this section.

(c) M-SHARP Transfer Data Summary. When detaching from a unit, a current hardcopy report for individual event proficiency status shall be included in this section.

(d) Aircraft Weapons Qualifications.

(e) Licenses, certificates, etc.

(4) Section Four - Individual Training Requirements. This section shall contain:

(a) All command qualification and designation letters should be maintained in this section.

(b) Formal Schools completion certificates.

2. NVG Flight Time. Aircrew shall record applicable NVG flight information via M-SHARP. Operations personnel shall log aircrew NVG time within the Aviators Flight Logbooks (OPNAV 3760/31) in the most underutilized column(s) applicable to the specific crew position and community best practices. Regardless which column(s) is utilized, the annotation for NVG/Night Systems time shall be separated as "Total NVG/NVG LLL" time. For example, if a flight consisted of 3.0 total NVG hours and 1.5 hours of that time was LLL, the entry would be "3.0/1.5."

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CHAPTER 3

AVIATION FLYING SQUADRON TRAINING
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CHAPTER 3

AVIATION FLYING SQUADRON TRAINING
RULES OF CONDUCT (ROC)

300. GENERAL AVIATION ROC

1. General

a. Purpose. This chapter contains policy for the following flight programs. CG, MCCDC tasks the Commanding Officer, MAWTS-1 with developing training courses and establishing criteria for instructor certification for these programs:

(1) Low Altitude, including:

(a) FW Low Altitude Tactics (LAT).

(b) RW Terrain Flight (TERF).

(c) Tiltrotor LAT.

(2) Night Operations and Night Systems (NS) for RW, FW, and Tiltrotor.

(3) Air Combat Maneuvering (ACM) including:

(a) FW ACM and Defensive Tactics (DT).

(b) RW Defensive Measures (DM) and Defensive Air Combat Maneuvering (DACM).

(c) Tiltrotor Defensive Combat Maneuvers (DCM).

(4) Forward Air Control (Airborne) [FAC(A)].

b. Authority. Authority and responsibility for ROC rests with CMC (DC AVN), CG MCCDC and Force Commanders. Training ROC are applicable during peacetime training evolutions and are not intended to restrict contingency/combat operations or combat rehearsals.

c. Safety. Commanders shall conduct training in accordance with the guidelines of this chapter and OPNAVINST 3710.7.

2. Currency. Currency is a control measure used to provide an additional margin of safety based on exposure frequency to a particular skill. It is a measure of time since the last event demanding that specific skill. Loss of currency does not affect a loss of proficiency. For example, currency determines minimum altitudes in ROC based upon the most recent low altitude fly date.

3. CH-53 Passenger Restrictions. When CH-53D/E aircraft are used to transport passengers, the maximum allowable load is 24. Authority to deviate from this 24-passenger restriction for operational necessity is vested in the MAGTF commander.

301. ROC FOR LOW ALTITUDE FLIGHT

1. General

a. Purpose. To standardize ROC for low altitude flight programs.

b. Scope. T&R manuals contain community specific policies, responsibilities, training syllabi and flight objectives for FW, RW, and tiltrotor aircraft participating in LAT and TERF. This section stipulates the training criteria and the ROC peculiar to the 3 types of low altitude flight.

c. Safety. The low altitude regime places high demands on aircrew skill and judgment requiring stringent ROC to ensure safe event completion.

(1) Squadron commanders shall ensure that aircrew conducting LAT/TERF training are in compliance with appropriate T&R ROC.

(2) Unscheduled LAT/TERF is strictly prohibited.

d. Definitions

(1) Comfort Level (CL). CL is the lowest altitude where aircrew can accommodate task loading and maintain safe terrain clearance. CL is a perceptual concept that concedes individual differences and is never a hard altitude. CL will vary according to terrain, aircrew skill, currency, and degree of training in the low altitude environment.

(2) Climb to Cope. Aircrew will employ climb to cope when situational awareness or mission performance is degraded. The climb to cope may be executed as an adjustment for CL or as a response to a "Knock It Off" call. Training may resume once all aircrew are confident that continued safe operations are assured.

(3) Knock It Off (KIO). When a dangerous loss of situational awareness is recognized or a potentially hazardous circumstance develops, any crewmember shall call for a KIO without delay. The response to a KIO call will be an immediate wings level controlled climb to briefed altitude and discontinuation of training until the cause for the KIO has been adequately addressed and all aircrew concur on a course of action.

(4) Terminate. To cease the current maneuver, crewmembers shall use the term "terminate." The response to "terminate" shall be an immediate discontinuation of maneuvering and leveling off at present or briefed altitude.

(5) Minimum Safe Altitude (MSA). An altitude that provides 500 feet of clearance above the highest obstacle within 5 nm either side of course line or planned course deviation for that leg of the route. MSA shall be briefed for all LAT training.

(6) Emergency Safe Altitude (ESA). An altitude that provides 1000 feet of clearance above the highest obstacle within 25nm either side of course line for the entire route. ESA shall be briefed for all LAT training.

- e. Weather Minimums. Low altitude weather minimums are as follows:

<u>Flight</u>	<u>Ceiling/Visibility</u>
TERF	1,000ft AGL/3 NM
LAT	3,000ft AGL/5 NM
MV-22 LAT in Conv Mode	1,000ft AGL/3 NM

- f. Low Altitude Flight Qualification, Proficiency, and Currency

(1) Low Altitude Qualifications. Aircrew achieve FW LAT/Tiltrotor LAT/TERF qualification by completing the stage of training or specified events as delineated in individual T&R syllabi and Chapter 6 of this Manual. Non-qualified aircrew require supervision of a FW LAT/Tiltrotor LAT/TERF instructor.

(2) Low Altitude Proficiency

(a) When FW LAT/Tiltrotor LAT/TERF qualified aircrew lose proficiency in a particular FW LAT/Tiltrotor LAT/TERF flight event, they may regain proficiency in that flight event by satisfactorily demonstrating those skills required of that particular syllabus flight event to a Low Altitude Tactics Instructor (LATI) or Terrain Flight Instructor (TERFI).

(b) In cases where there are no proficient LATIs/TERFIs available, two non-proficient LATIs/TERFIs may fly together in order to regain proficiency (See paragraph 204.

(3) Low Altitude Flight Currency. Currency Intervals are the measure of time since the last event demanding that specific skill. When aircrew exceed a currency interval, the aircrew must abide by the minimum altitudes commensurate with their particular currency interval. Aircrew may update the currency interval and corresponding minimum altitudes during a single sortie; the individual may update currency after flying an appropriate segment of a FW LAT/Tiltrotor LAT/TERF route. In aircraft requiring two or more aircrew for the briefed mission, the most restrictive aircrew's currency interval applies to the aircraft. In flights of two or more aircraft, the most restrictive aircrew currency interval applies to the flight.

g. Low Altitude Flight Training Areas

(1) Pilots shall conduct low altitude flight in restricted airspace, MOAs, and on published Military Training Routes. Wing/MAGTF commanders may designate other low altitude training areas.

(2) Low altitude training areas should be suitable for the aircraft to perform training in dive recovery, three dimensional maneuvers and three dimensional defensive maneuvers against simulated air-to-air, SAM, and AAA threats. Although not required, the optimum terrain should also allow training in terrain masking, indirect terrain masking, and ridgeline crossings.

(3) The area should be free of vertical obstacles that constitute a danger to the free navigation required of low altitude training.

h. Night Low Altitude Flight. Night low altitude flight (FW LAT/Tiltrotor LAT/TERF) without NVGs is prohibited. Aircrew must be day FW LAT/Tiltrotor LAT/TERF qualified and current prior to commencing night low altitude training. See currency tables in paragraphs 303, 304, and 305.

i. FW LAT/Tiltrotor LAT/TERF Training With Embarked Troops. Low altitude flight poses increased operational risk. The transport of troops during FW LAT/Tiltrotor LAT/TERF training is authorized subject to the following restrictions:

- (1) All aircrew are qualified, proficient and current per this Manual and the respective T/M/S T&R Manual.
- (2) Aircrew shall utilize FW LAT/Tiltrotor LAT/TERF areas or routes as specified in respective MAW and MAG operations SOPs.
- (3) The aircraft has the requisite power margin as specified in respective MAW, MAG and squadron operations SOPs.
- (4) Authorization for the specific FW LAT/Tiltrotor LAT/TERF training event has been approved by the MAGTF commander. For training events conducted during MAWTS-1 WTI classes, approval authority is CG TECOMG-3.
- (5) Waiver authority for any of the above restrictions is vested in the MEF CG.

302. FW LAT

1. The term FW LAT applies where the briefed intent is to conduct tactical flight when terrain avoidance is a significant factor. FW LAT is further defined as intent to fly below 500 feet AGL.
2. F-5 Adversary Missions and LAT Restrictions. Due to fixed wing adversary missions in rotary wing T&R manuals, the F-5 T&R manual requires a FW LAT qualification and LATI syllabus. The minimum altitude for the F-5 in a FW LAT environment shall be 500 feet AGL.
3. FW Ordnance Delivery Minimum Recovery Altitudes. FW ordnance delivery for the sole purpose of refining delivery skills is excluded from the FW LAT definition. The minimum dive delivery recovery altitude will be the applicable TACMAN NATIP altitude as defined for the specific ordnance being employed. The minimum altitude will be the result of an appropriate release altitude that accounts for the highest altitude as required for fragmentation avoidance, terrain clearance and fuse arming time.
4. FW Initial Qualification. A LATI is required in the aircraft/flight.
5. FW NS LAT. See paragraph 310.

303. FW LAT CURRENCY AND MINIMUM ALTITUDES. The minimum altitude for FW LAT training is 300 feet AGL. Day LAT shall not update NS LAT currency requirements. NS LAT shall update day LAT currency requirements. The following minimum altitude restrictions based on currency interval apply:

1. Single Aircraft and Section
 - a. CL but no lower than 300 feet AGL.
 - b. Minimum altitudes for KC-130 aircraft. While Aerial Delivery (AD) and Assault Landing Zone (ALZ) do not constitute LAT, maneuvering at low altitude makes terrain avoidance a significant factor just the same. Accordingly, the altitude parameters outlined below shall apply to those operations as well.

(1) Minimum maneuvering altitude is 500 feet AGL regardless of currency interval.

(2) Minimum non-maneuvering altitude is 300 feet AGL. Angle of bank shall be no greater than 30 degrees and flight path angle not be lower than -1 degrees. Turns conducted below 500 feet AGL shall be limited to those required for navigation, with no single turn exceeding 60 degrees of heading change.

2. Division/Strike Formation. CL but no lower than 500 feet AGL.

3. In a formation where sections have a minimum of 1 nm nose to tail separation, the flight lead should consider each section as a separate section for altitude criteria.

CL, BUT NO LOWER THAN:

LAT EVENT	1-30 DAYS CURRENCY INTERVAL	OVER 30 DAYS CURRENCY INTERVAL
Single or Section	300' AGL*	500' AGL
Division	500' AGL	500' AGL
Aerial Refueling	500' AGL	1,500' AGL

* KC-130 non-maneuvering altitude.

4. FW LAT Minimum Altitude Waivers. Requests to fly LAT training events lower than the FW LAT minimum altitudes delineated above shall be submitted in message format to HQMC via operational chain of command (To CMC WASHINGTON DC APP; Info CG TECOM ATD). Requested training events, altitudes and applicable time periods for the waiver should be identified.

5. When authorized by HQMC, the following FW LAT minimum altitude restrictions based on currency interval apply:

a. Single Aircraft

(1) CL but no lower than 200 feet AGL.

(2) Minimum Altitude Capability (MAC). MAC is flown as a defensive response to engagement by a threat and during speed rush baseline training. At this level, aircrew focuses entirely on terrain clearance tasks. The minimum FW MAC training event altitude is 100 feet AGL (200 feet AGL for KC-130 aircraft) when the pilot is current and chased by a current LATI on an approved low altitude course.

(3) Night MAC Training is restricted to no lower than 200 feet AGL.

b. Section

(1) CL but no lower than 200 feet AGL.

(2) MAC not authorized.

c. Division/Strike Formation

(1) CL but no lower than 500 feet AGL.

(2) MAC not authorized.

WHEN AUTHORIZED BY HQMC: CL, BUT NO LOWER THAN:

LAT Event	1-15 Days Currency Interval	16-30 Days Currency Interval	30+ Days Currency Interval
Single Aircraft	200' AGL/MAC	300' AGL	500' AGL
Section	200' AGL	300' AGL	500' AGL
Division	500' AGL	500' AGL	500' AGL
Aerial Refueling	500' AGL	500' AGL	1,500' AGL

304. RW TERF

1. TERF Flight. TERF is RW flight conducted during day or night, VMC, when the intent is to fly below 200 ft AGL. Low Level, Contour, and Nap Of the Earth (NOE) compose the basic TERF regimes. Missions performed on an ordnance delivery range for the sole purpose of refining delivery skills does not constitute TERF. Confined Area Landings (CALs) training does not constitute TERF from the IP to the LZ.

a. Low Level Flight. Flight conducted at a selected altitude to minimize or avoid enemy detection or observation. Aircrews pre-select the route that generally consists of straight-line navigation, constant airspeed and constant altitude (MSL).

b. Contour Flight. Contour Flight conforms generally to the elevations of the earth. Contour flight takes advantage of available cover and concealment to avoid enemy observation or detection of the aircraft. The pilot varies airspeed and altitude as vegetation and obstacles dictate.

c. Nap of the Earth (NOE) Flight. NOE is flight conducted as close to the earth's surface as vegetation and obstacles permit while generally following the contours of the earth's surface. The pilot varies airspeed and altitude as influenced by terrain, weather, ambient light, and the enemy situation.

2. Aircrew Requirements. To ensure full lookout coverage capability in helicopters possessing a cabin section (CH-46, CH-53, UH-1), minimum aircrew for all TERF flights shall be a pilot, copilot, crew chief, and aerial gunner/observer. The aircraft commander shall ensure a thorough mission brief is conducted with all aircrew. Emphasize lookout doctrine, obstacle clearance, ICS calls, radio procedures, and emergencies.

3. TERF Currency and Minimum Altitudes

a. Minimum TERF altitude for CH-46/CH-53 is 50 feet AGL.

b. Minimum TERF altitude for AH-1/UH-1 is 10 feet AGL.

c. The following minimum altitude and airspeed restrictions based on currency apply:

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COMFORT LEVEL, BUT NO LOWER THAN:

TERF Event	1-30 Days Currency Interval	Over 30 Days Currency Interval
Low Level	100' AGL	150' AGL
Contour	50' AGL	100' AGL
NOE	10' AGL (40 knots or less)	(Authorized after Para 304.3.f requirements are met.)

d. Refer to Para 301.1.f.3 for low altitude flight currency involving two or more aircrew.

e. After 30 days, CH-46/CH-53 pilots shall regain currency by performing low level flight prior to conducting contour flight.

f. After 30 days, AH-1/UH-1 pilots shall regain currency by flying an NOE flight with a 30-day current PQM. If a 30-day current PQM is unavailable, the pilots shall regain currency by performing low level flight followed by contour flight prior to NOE flight.

305. TILTROTOR LAT

1. Tiltrotor LAT is flight conducted during day or night, VMC, where the briefed intent is to conduct tactical flight where terrain avoidance is a significant factor. LAT is further defined as intent to fly below 500' AGL in order to develop terrain avoidance skills. Assault Landing Zone operations are excluded from the LAT definition. Tiltrotor LAT is composed of both low level and contour flight profiles, and can be accomplished in APLN and CONV (Nacelle settings greater than or equal to 60 degrees) modes.

a. Low Level Flight. Flight conducted at a selected altitude to minimize or avoid enemy detection or observation. Aircrews pre-select a route that generally consists of straight-line navigation, constant airspeed and constant altitude (MSL).

b. Contour Flight. Contour flight conforms generally to the elevations of the earth. Contour flight takes advantage of available cover and concealment to avoid enemy detection or observation of the aircraft. The pilot varies airspeed and altitude as vegetation and obstacles dictate.

2. Tiltrotor LAT Currency and Minimum Altitudes. Following successful completion of a 50 nautical mile segment on an approved LAT route at the appropriate currency interval altitude, the aircrew is considered current and may continue LAT at the next lower currency interval. The following minimum altitude restrictions based on currency interval apply:

LAT Currency and Minimum* Altitudes (AGL) CL, But No Lower Than:				
Flight Mode	0-30 Days		31+ Days	
	Day/ HLL	LLL	Day/ HLL	LLL
APLN	200'	500'	500'	500'
CONV	50'	100'	200'	200'

306. GENERAL ROC FOR NIGHT OPERATIONS

1. Purpose. To standardize the training rules for FW, RW and tiltrotor aircraft conducting night operations training.
2. Scope. This section stipulates training criteria and ROC peculiar to FW, RW and tilt-rotor aircraft night operations.
3. Safety. Squadrons will conduct night operations within the guidelines of this Chapter and OPNAVINST 3710.7. Commanders shall ensure aircrew conducting night training are properly qualified and appropriate flight leadership is represented within the flight.
4. Illumination. The approved methods for deriving illumination requirements for night operations are the Solar/Lunar Almanac Program (SLAP) and Solar/Lunar Almanac Calculations (SLAC) within M-SHARP. These programs do not factor in the effects of cloud cover, humidity, haze, dust, effects of low moon angle, terrain, and shadows. These effects may degrade forecast illumination. Sound judgment must temper decisions to fly under less than optimal conditions. Illumination levels are defined as:
 - a. High Light Level (HLL): Illumination .0022 LUX or above.
 - b. Low Light Level (LLL): Illumination below .0022 LUX.
5. NVD Operations. Aircrew shall only utilize NAVAIR approved NVGs for specific T/M/S. NAVAIR NVD restrictions as applicable to T/M/S and NVG model/type shall be adhered to. Squadrons shall establish an NVG eye lane as described in the MAWTS-1 NVG Manual or use the ANV-2020 (Hoffman 20/20 box) to assess NVG performance prior to every NVG flight.
6. Night Systems (NS) Qualifications. Aircrew achieve NS qualifications by completing the stage of training or specified events as delineated in individual T&R syllabi and Chapter 6 of this Manual. Non-qualified aircrew require supervision of a Night Systems Instructor (NSI), Night Systems SAR Instructor (NSSI), Night Systems Familiarization Instructor (NSFI), or equivalent where applicable.
7. Night Currency. No pilot shall sign for an aircraft for a night flight (Night Systems or unaided) without having flown that model aircraft within the previous 15 days.

* In LLL conditions, 300' AGL in airplane (APLN) mode is authorized for a 0-30 day LAT current crew along an approved route segment of 50 nm or less. Descent to 300 AGL under these circumstances shall be commenced from a wings level attitude. Once established at the lower altitude, the aircraft is limited to 30° angle of bank with no single turn exceeding 60° of heading change. Prior to flying a route segment at 300' AGL in LLL conditions, the segment shall be screened to ensure that there are no obstructions in excess of 200'AGL for three nautical miles either side of the route width.

307. FW NIGHT EXTERNAL LIGHTING RULES

1. FW Night External Lighting. Aircraft external lighting shall comply with existing FAR regulations and approved FAA exemptions. Aircraft incandescent external lighting shall be at the highest intensity consistent with NVD compatibility unless the FAA grants specific FAA waivers to solely use IR external lighting.
2. FAA Exemption No. 8028C. FAA Exemption No. 8028C allows the DoN to conduct U.S. Marine Corps aircraft night vision device flight training operations without lighted position lights. The following conditions and limitations are excerpts from the exemption regarding training operations.
 - a. A flight of two or more aircraft must have a dedicated observer aboard each aircraft to provide timely traffic notifications with non-participatory traffic.
 - b. Flights need to be escorted by a properly lighted aircraft serving as an observation platform.
 - c. When non-participatory aircraft are relevant, the PIC of each aircraft must light its position lights and keep them lighted until traffic is no longer a factor.
 - d. Training operations must be conducted at or below 500' AGL and contained within a prescribed and publicized area that is simply defined, is established in an area of low traffic density, is not within 4 NM of any public use airport, does not infringe upon FAA designated airspace areas, and has been coordinated with the appropriate FAA regional offices.
3. Single Aircraft Operations. Navigation/position lights on and at the highest intensity consistent with NVD compatibility, and anti-collision light(s) on.
4. Multi-aircraft Operations. Mission Commanders and PICs need to make appropriate risk decisions to maintain FAR see and avoid principles in various airspace with non-participatory and civilian non-NVG equipped aircraft during aided formation flying. Consideration needs to be given regarding use of overt lighting, aircraft separation and whether or not to dissolve the flight (e.g. fly section or single ship) or rendezvous enroute to maintain the formation's visibility to other non-participatory and civilian non-NVG equipped aircraft.
 - a. Flights of up to four aircraft shall use lighting compatible with NVD operations. Per FAR 14 CFR Section 91.209(b), the anti-collision light(s) need not be lighted when the PIC determines that, because of operating conditions, it would be in the interest of safety to turn the light(s) off. In all cases, the last aircraft in the flight shall fly with navigation/position lights on, formation lights on at the highest intensity consistent with NVD compatibility, and anti-collision light(s) on. Anti-collision light(s) shall be incandescent when FAA waivers do not apply.
 - b. All flight members shall be briefed on the lighting configuration of each aircraft in the flight before they conduct separation and rejoin.
5. Flights outside CONUS shall obtain approval from the airspace controlling authority prior to conducting training with any aircraft lighting secured.

6. The FAR regulation to see and avoid shall take priority over NVD tactical training. When conducting NVD operations, aircrew should be aware that most civilian aircraft will not be able to see and avoid NVD light configured aircraft. All aircrew shall become familiar with FAA Exemption No. 8028C and FAR 14 CFR Section 21.209 in their entirety.

308. RW AND TILTROTOR NIGHT EXTERNAL LIGHTING RULES

1. RW and Tiltrotor External Lighting. Aircraft external lighting shall comply with existing FAR regulations and approved FAA exemptions. Aircraft incandescent external lighting shall be at the highest intensity consistent with NVD compatibility unless the FAA grants specific FAA waivers to solely use IR external lighting.

2. FAA Exemption No. 8028C. FAA Exemption No. 8028C allows the DoN to conduct U.S. Marine Corps aircraft night vision device flight training operations without lighted position lights. The following conditions and limitations are excerpts from the exemption regarding training operations.

a. A flight of two or more aircraft must have a dedicated observer aboard each aircraft to provide timely traffic notifications with nonparticipating traffic.

b. Flights need to be escorted by a properly lighted aircraft serving as an observation platform.

c. When nonparticipating aircraft are relevant, the PIC of each aircraft must light its position lights and keep them lighted until traffic is no longer a factor.

d. Training operations must be conducted at or below 500' AGL and contained within a prescribed and publicized area that is simply defined, is established in an area of low traffic density, is not within 4 NM of any public use airport, does not infringe upon FAA designated airspace areas, and has been coordinated with the appropriate FAA regional offices.

3. Single Aircraft Operations

a. Navigation/position lights on and at the highest intensity consistent with NVD compatibility, and anti-collision light(s) on.

b. When conducting ground hover or during terminal level of landing at designated training areas, anti-collision light(s) and/or navigation/position lights may be turned off if they interfere with safe flight operations.

c. When operating in Class D airspace, controller permission is required prior to securing lights during hover or terminal phase of landing.

4. Multi-aircraft Operations. Mission Commanders and PICs need to make appropriate risk decisions to maintain FAR see and avoid principles in various airspace with non-participatory and civilian non-NVG equipped aircraft during aided formation flying. Consideration needs to be given regarding use of overt lighting, aircraft separation and whether or not to dissolve the flight (e.g. fly section or single ship) or rendezvous enroute to maintain the formation's visibility to other non-participatory and civilian non-NVG equipped aircraft.

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a. Outside Special Use Airspace. Flights of up to four aircraft are permitted and shall have:

(1) Navigation/position lights on the highest intensity compatible with NVD operations and ambient conditions for lead through the dash three aircraft. Per FAR 14 CFR Section 91.209(b), the anti-collision light(s) need not be lighted when the PIC determines that, because of operating conditions, it would be in the interest of safety to turn the light(s) off.

(2) In all cases, the last aircraft in the flight shall have anti-collision and navigation/position lights on and at an appropriate setting for existing ambient conditions and visible to non-participatory aircraft.

(3) All functional, visible formation and blade tip lighting on and at the highest intensity compatible with NVD operations for all aircraft in the flight.

(4) Use of IR lighting is at the discretion of the aircraft commander/flight leader. This does not preclude the requirement for visible navigation and anti-collision light(s) as described above.

(5) Regardless of the number of aircraft in the flight, separation between lead aircraft and the last aircraft in the flight shall not exceed 1 nm.

b. Within Special Use Airspace. When operating in special use airspace with NVDs, flights shall operate as follows:

(1) Lead to, but not including the last aircraft, may have navigation/position and anti-collision lights secured if at or below 500' AGL. Per FAR 14 CFR Section 91.209(b), the anti-collision light(s) need not be lighted when the PIC determines that, because of operating conditions, it would be in the interest of safety to turn the light(s) off.

(2) All functional, formation and blade tip lighting on and at the highest intensity compatible with NVD operations for all aircraft in the flight.

(3) The last aircraft in each flight shall have anti-collision light(s) on and navigation/position lights on and at the highest intensity compatible with NVD operations.

(4) Regardless of the number of aircraft in the flight, separation between lead aircraft and the last aircraft in the flight shall not exceed 1 NM.

5. Flights outside CONUS shall obtain approval from the airspace controlling authority prior to conducting training with any aircraft lighting secured.

6. FAR regulations to see and avoid shall take priority over NVD tactical training. When conducting NVD operations, aircrew should be aware that most civilian aircraft will not be able to see and avoid NVD light configured aircraft. All aircrew shall become familiar with FAA Exemption No. 8028C and FAR 14 CFR Section 21.209 in their entirety.

309. RW NIGHT OPERATIONS

1. Night Training Policies

a. On unaided night flights, NSQ aircrew may wear and temporarily utilize NVGs to enhance situational awareness, terrain avoidance, and safety. The flight will

be conducted under unaided flight rules. NVG use shall be noted on the flight schedule.

b. To ensure full lookout coverage in helicopters possessing a cabin section, there shall be an aerial gunner/observer in addition to the crew chief for NVG flights, except as detailed per individual T&R manuals.

c. NVG HLL/LLL Flights

(1) All aircrew shall be NSQ HLL per appropriate T&R syllabus prior to commencing LLL syllabus training.

(2) All pilots flying NVG HLL flights shall fly with a NSI/NSFI unless both the pilot and copilot are NSQ HLL. All pilots shall fly NVG LLL flights with a NSI unless both the pilot and copilot are NSQ LLL.

(3) All enlisted aircrew flying NVG HLL flights shall fly with a designated NSI/NSSI/NSFI unless both the crew chief and the AGO are NSQ HLL. All enlisted aircrew flying NVG LLL shall fly with a NSI/NSSI unless both the crew chief and the AGO are NSQ LLL.

d. Night TERF operations without NVGs are prohibited. NVG TERF flights shall be conducted in approved areas or on routes using maps updated with current hazards. Night TERF operations must meet the requirements set forth in paragraph 304 of this Manual.

e. Night Carrier Qualifications. All T/M/S aircraft T&R manuals shall require the capability to operate unaided on ships. In recognition of the safety and increased situational awareness afforded by the use of NVDs, unaided CQ is not a prerequisite to NVG CQ. Since landing to an NVD compatible deck cannot always be assured, unaided recoveries remain a valid requirement. Initial Night Systems Carrier Qualification training shall be accomplished under High Light Level conditions. Requalification and proficiency training may be accomplished under any light level condition.

2. Night Currency. Prior to conducting night shipboard operations with passengers aboard, the pilot and copilot shall be night carrier qualified and have conducted a minimum of two night shipboard landings each within the last 30 days. All other crewmembers shall be night carrier qualified and have one night shipboard flight within the last 30 days.

3. NVG Equipment Requirements

a. Aircrew shall conduct NVG operations only in NVG compatible aircraft.

b. Aircrew members shall possess an operational standard issue flashlight with an NVG compatible lens on every NVG flight.

c. Aircraft shall have an operational spotlight on all NVG sorties. The IR spotlight is not a substitute for ambient illumination.

4. NBC Training. For NBC flight training, aircrew are authorized to wear full NBC protective equipment subject to the following restrictions:

a. For night operations, only the CBR/AR-5 eye/respiratory protective system is authorized for in-flight use.

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- b. Initial NBC training syllabi shall be complete per T&R T/M/S syllabi.
- c. All aircrew shall be NSQ appropriate for the ambient conditions. When using the CBR/AR-5 during NVG training flights, one pilot and one aircrew must remain unmasked due to the restricted field of view when using AN/AVS-9 with the CBR/AR-5.
5. NVG Training Without Troops. NVD training/operations are subject to the following restrictions:
- a. HLL Conditions. Minimum aircrew shall include NSQ HLL pilot, co-pilot, crew chief and aerial observer.
- b. LLL Conditions. Minimum aircrew shall include NSQ LLL pilot, co-pilot, crew chief and aerial observer.
- c. All aircrew shall be NSQ HLL per appropriate T&R syllabus prior to commencing LLL syllabus training.
6. NVG Training With Troops
- a. Flights with embarked troops in HLL conditions are subject to the following criteria:
- (1) Minimum crew shall be a Pilot, copilot, crew chief and an aerial gunner/observer.
- (2) The pilot and copilot shall be NSQ HLL per the appropriate T&R syllabus and must have flown one hour of NVG time within the last 30 days.
- (3) Crew chiefs and aerial gunners/observers shall be NSQ HLL per the appropriate T&R syllabus and have flown one hour of NVG time within the last 30 days.
- b. NVG operations with embarked troops in the LLL range are subject to the following criteria:
- (1) Minimum aircrew as defined in paragraph 308.6.a.1
- (2) The pilot and copilot shall be NSQ (HLL and LLL) per the appropriate T&R syllabus and have flown one hour of NVG time (HLL or LLL) within the last 30 days.
- (3) Crew chiefs and aerial gunners/observers shall be NSQ LLL per the appropriate T&R syllabus and have flown one hour of NVG time (HLL or LLL) within the last 30 days.
7. NVG Carrier Qualification (NVG CQ)
- a. NVG CQ shall be delineated in respective T/M/S syllabi. Initial Night Systems Carrier Qualification training shall be accomplished under High Light Level conditions. Requalification and proficiency training may be accomplished under any light level condition.
- b. All participants shall have a thorough understanding of LHA/LHD NATOPS and fleet/ship specific NVG procedures as well as other applicable directives and procedures. Aircrew shall brief, understand, and comply with these directives and procedures.

- c. The Pilot Under Instruction (PUI), and/or Crew Chief/AGO under instruction shall be NSQ HLL.
- d. Initial NVG CQs shall be flown with a NSI.
- e. Unaided night CQs will be chained to aided CQs.

310. FW NIGHT OPERATIONS

1. FW NS LAT Training

- a. The following equipment is required and shall be operable for FW NS LAT training missions unless the MAGTF/MAG commander grants a waiver: Night Vision Devices, NVG compatible cockpit lighting, Heads Up Display (HUD), inertial navigation systems, moving map, radar altimeter, and anti-collision lights.
- b. FW NS LAT altitude restrictions, currency and proficiency requirements are the same as day LAT restrictions and requirements.
- c. FW NS LAT operations shall only be conducted during HLL conditions.
- d. FA-18/AV-8/KC-130J aircrew conducting FW NS LAT operations shall be LAT and NS Low qualified. Non-NSQ Low aircrew shall be NSQ HI prior to NSQ Low training and require supervision of an NSI flight lead or equivalent during NSQ Low training (see Appendix C for NSQ HI/Low definitions).

2. Non-LAT FW NS Training

- a. FW night flights are limited to 1,000 feet AGL minimum when operating without NVGs.
- b. NAs/NFOs who are not NSQ/NSQ HI require an NSI, or equivalent, in the flight. For EA-6 aircraft, NS qualification requirements apply to front seat aircrew.
- c. Pilots who are NSQ, NSQ HI, or NSQ Low may operate down to minimum altitudes of 500' AGL in HLL conditions and 1000' AGL in LLL conditions.
- d. KC-130 altitude restrictions above apply except for aerial delivery and ALZ missions from IP inbound. IP to DZ/ALZ constitutes the terminal environment; minimum altitudes listed in the KC-130 ANTTP apply.

3. During unaided flights, NSQ aircrew not at the controls may wear and temporarily utilize helmet mounted NVGs to enhance situational awareness, terrain avoidance and safety. NVG use by authorized aircrew shall be noted on the flight schedule. Aircrew not at the controls may use NVDs in the handheld mode to enhance situational awareness. Squadrons shall not procure or manufacture NVG light kits.

4. When conducting NVG operations, all aircrew shall use NVGs unless crew duties dictate otherwise. In a flight of aircraft, all aircrew in the flight shall use NVGs unless crew duties dictate otherwise. Flights utilizing NVGs may support, or be supported by, non-NVG equipped aircraft provided they are briefed and flown as a separate flight. Helmet mounted NVGs shall be utilized unless crew duties dictate otherwise. When crew duties dictate, NVGs may be temporarily donned in the up position.

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5. The use of NVGs for FW takeoffs and landings is authorized provided airfield lighting has been adjusted to the minimum level consistent with flight safety. Consideration must be made for lighting conditions in the local operating environment. NAVAIR NVD restrictions applicable to T/M/S and NVG model/type shall be observed.

311. TILTROTOR NIGHT OPERATIONS

1. Night Training Policies

a. On unaided night flights, NSQ crewmembers may wear and temporarily utilize NVGs to enhance situational awareness, terrain avoidance, and safety. The flight will be conducted under unaided flight rules. NVD use by authorized crewmembers shall be noted on the flight schedule.

b. The requirement for an aerial gunner/observer in the cabin section in addition to the crew chief for NVD flights is as specified in MV-22 T&R Chapters.

c. Crewmembers shall fly NVD events with a designated and proficient NSI (or NSFI for 1000 phase training) unless the aircrew are NSQ for the predicted light level.

2. Night Currency and Proficiency

a. Prior to conducting night shipboard operations with passengers aboard, the pilot and copilot shall be night carrier qualified and shall have conducted a minimum of two night aided shipboard landings each within the previous 30 days. All other aircrew shall be night carrier qualified.

b. When qualified aircrew lose proficiency in a Night Systems IAT sortie, they may regain proficiency by satisfactorily demonstrating those skills required of that particular syllabus flight to an NSI.

3. NVD Training Without Troops. For initial and refresher training, the copilot, crew chief and aerial gunner/observers shall be NSQ HLL per the appropriate MV-22 syllabus prior to flying in LLL conditions.

4. NVD Training With Troops

a. Flights with embarked troops in HLL are subject to the following criteria:

(1) Minimum crew IAW the applicable MV-22 syllabus.

(2) The pilot and copilot shall be designated NSQ HLL and must have flown at least one hour of NVD time within the last 30 days.

(3) Crew chiefs and aerial gunners/observers shall be NSQ HLL.

b. NVD operations with embarked troops in LLL conditions are subject to the following criteria:

(1) Minimum crew IAW the applicable MV-22 syllabus.

(2) The pilot and copilot shall be designated NSQ (HLL and LLL) and must have flown at least one hour of NVD time (HLL or LLL) within the previous 30 days.

(3) Crew chiefs and aerial gunners/observers shall be NSQ LLL.

5. NVD Carrier Qualification (NVD CQ)

a. NVD CQ shall be delineated in respective T/M/S syllabi. Initial Night Systems Carrier Qualification training shall be accomplished under High Light Level conditions.

b. All participants shall have a thorough understanding of LHA/LHD NATOPS and fleet/ship specific NVD procedures as well as other applicable directives and procedures. Crewmembers shall brief, understand, and comply with these directives and procedures.

c. The PUI shall be NSQ HLL.

d. Initial NVDCQ shall be flown with a NSI.

e. Unaided night CQs will be chained to aided CQs.

312. ROC FOR ACM, DT, DM, DACM, and DCM

1. General

a. Purpose. To standardize ROC for aircraft conducting ACM/DT/DM/DACM/DCM training. The rules set forth herein and in OPNAVINST 3710.7 are minimum requirements. Commanders should promulgate supplementary directives to delineate syllabus contents, proficiency levels required, communications procedures, safety precautions, and other applicable areas of concern. Responsibility for the safe and efficient implementation of realistic combat training rests with all levels of command.

b. Scope. ACM/DT/DM/DACM/DCM training is designed to develop the high level of skill required to combat the current and future threat. OPNAVINST 3710.7 and the Aviation T&R Program contains the overall policies, responsibilities, training syllabi, and flight objectives for ACM/DT/DM/DACM/DCM.

c. Safety. Squadrons conducting ACM/DT/DM/DACM/DCM will operate within the guidelines of this chapter, OPNAVINST 3710.7, and applicable MAWTS-1 publications. Squadrons should conduct FW ACM/DT training under radar control when available. Commanders shall ensure aircrew conducting ACM/DT/DM/DACM/DCM training are properly qualified and appropriate flight leadership is represented within the flight. Unscheduled ACM/DT/DM/DACM/DCM is strictly prohibited.

d. ACM/DT/DM/DACM/DCM Qualifications. Aircrew achieve qualification by completing the stage of training or specified events as delineated in individual T&R syllabi and Chapter 6 of this Manual. Non-qualified aircrew require supervision of a ACTI/DM/DT/RWDACM/DCM instructor, or equivalent.

e. ACM/DT/DM/DACM/DCM Training Areas

(1) Training shall only be conducted in designated warning areas, restricted areas, Military Operating Areas (MOAs), appropriate blocks of controlled airspace as assigned by Air Traffic Control (ATC), or in other designated areas where safe separation from non-participants can be maintained.

(2) At a minimum, designated ACM/DT/DM/DACM/DCM training areas shall be clear of Federal airways, control zones, and other areas of air traffic congestion,

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unless established pursuant to a letter of agreement with the Federal Aviation Administration (FAA) or host nation agreement.

(3) When authorized by Force commanders, subordinate commanders may designate ACM/DT/DM/DACM/DCM training areas and establish procedures to ensure aircrew and flights entering these areas are aware of all other flights operating therein.

(4) ACM/DT/DM/DACM/DCM aircrew should use instrumented air combat ranges such as the Navy/Marine Tactical Combat Training System (TCTS) or the Air Force Air Combat Maneuvering Instrumentation (ACMI) as much as possible.

(5) ACM/DT/DM/DACM/DCM training flights entering special use airspace will request, from the appropriate controlling agency, advisory information on all other flights operating in the same area. Flights will use RADAR flight following when practical.

2. FW Air Combat Maneuvering. Aircrew participating in ACM/DT will conform to the following flight guidelines:

a. FW v FW

(1) When all crewmembers of a flight are ACM/DT qualified, the flight does not require an Air Combat Tactics Instructor (ACTI), a Defensive Tactics Instructor (DTI), Adversary Tactics Instructor (ATI) or equivalent.

(2) A non-ACM qualified NA may participate in ACM/DT training provided his flight leader is an ACTI/DTI or equivalent. In the case of 1 V 1 dissimilar ACM, the adversary must be an ACTI/ATI (USMC), designated ACM instructor or equivalent.

(3) A non-ACM/DT qualified NA/NFO of a crew concept aircraft may participate in ACM/DT training, provided at least one other aircrew in the same aircraft is designated an ACTI/DTI or equivalent.

(4) In the case of 1 V 1 dissimilar DT training with a non-qualified NA and/or NFO, the adversary pilot must be an ACTI/ATI, ACM Flight Lead/Section Lead or equivalent.

b. FW v RW or Tiltrotor. Aircrew of FW aircraft engaged in RW or tilt-rotor attack shall be ACM and LAT qualified. Slow speed, high AOA maneuvering below 10,000 ft AGL is prohibited by FW aircraft. Direct over-flight of adversary aircraft by the FW aircraft is prohibited. Supersonic flight is not authorized. Minimum FW altitude is 500 ft AGL.

c. Per OPNAVINST 3710.7, the following maneuvers are not considered ACM training:

(1) Snapshot drills (Gun Weave, Weapons Weave).

(2) Tail Chase (Heat to Guns drills).

(3) Forward Quarter Missile Defenses terminated at the merge.

(4) Air Intercepts performed per applicable portions of the T&R Manual.

(5) Aerobatic maneuvers per NATOPS manuals on scheduled training flights approved by competent authority.

3. DM and DACM. RW assault aircrew conducting DM and RW attack and utility aircrew conducting DACM will conform to the following flight guidelines. These training rules, along with the applicable T/M/S T&R syllabi and the MAWTS-1 DM and DACT guides delineate the responsibilities and flight objectives for this training.

- a. When all aircrew of a flight are DM/DACM qualified, the flight does not require a Defensive Measures Instructor (DMI)/Defensive Air Combat Maneuvering Instructor (DACMI). Additionally, two RWDACM qualified pilots may fly RWDACM sorties for training and proficiency.
- b. To ensure full lookout coverage capability in RW aircraft possessing a cabin section, there shall be an aerial gunner/observer in the cabin section in addition to the crew chief.
- c. A non-DM/DACM qualified pilot may participate in DM/DACM training provided the aircraft commander is a designated DMI/DACMI. A non-DM qualified aircrew serving in the cabin section may participate in DM training provided the other aircrew serving in the cabin section is a designated DMI.
- d. DM and DACM shall be conducted in day VMC in accordance with OPNAV 3710.7.
- e. Pilots of FW aircraft participating in DM/DACM shall be LAT and ACM qualified. Aircrew of RW aircraft conducting DM/DACM shall be TERF qualified and proficient.
- f. All DM/DACM participants must be aware of their particular aircraft's performance capabilities and limitations. Operational power checks or predictions (e.g. PFPS HOPS tool) should be conducted to assist in this awareness as required.
- g. Minimum RW altitude for DM and DACM against a FW or RW threat is 100 ft AGL. Minimum RW altitude for DM against a ground-based threat is 50 ft AGL. Minimum FW altitude for DM and DACM will be in accordance with OPNAVINST 3710.7.
- h. The friendly element will initiate maneuvering line numbers no closer than 200 ft between friendly aircraft. Upon first indication of the bandit the friendly element will maneuver to maintain at least 500 ft of separation from all aircraft during the engagement, including aircraft within the same element. Minimum aircraft separation during pre-briefed tail chase maneuvers in DACM is 200 ft.

4. DCM

- a. DCM consists of two types of events:
 - (1) 2 Tiltrotor v 1 RW.
 - (2) 2 Tiltrotor v 1 FW.
- b. DCM Aircrew Requirements
 - (1) When all crewmembers of a flight are DCM qualified, the flight does not require a DCMI.
 - (2) Minimum crew requirements shall be IAW the applicable T&R syllabus.
 - (3) A non-DCM qualified pilot may participate in DCM training, provided the Tiltrotor Aircraft Commander is a designated DCMI. A non-DCM qualified aircrew

serving in the cabin section may participate in DCM training, provided the other aircrew serving in the cabin section is a designated DCMI.

- c. Minimum tiltrotor altitude is 200 ft AGL.

313. ROC FOR FORWARD AIR CONTROLLER (AIRBORNE) OPERATIONS

1. General

- a. Purpose. To standardize the training rules for all USMC aircraft conducting FAC(A) training and ensure compliance with the most recent version of the Joint Close Air Support Action Plan Memorandum of Agreement, Joint Forward Air Controller (Airborne) [As of this publication date, JCAS AP MOA 2004-02, JFAC(A), July 2008; referred to as the 'JFAC(A) MOA' for brevity sake].

- b. Scope. This section stipulates training criteria and ROC peculiar to FAC(A) operations.

- c. Safety. Squadrons conducting FAC(A) operations shall operate within the guidelines of this chapter. Commanders shall ensure aircrew conducting FAC(A) training are properly qualified and appropriate flight leadership is represented within the flight.

- d. FAC(A) Qualifications. Aircrew achieve the FAC(A) qualification by completing the specified requirements as delineated in individual T&R syllabi and the requirements delineated in the JFAC(A) MOA. Aircrew undergoing initial FAC(A) qualification training require supervision of a FAC(A) instructor [FAC(A)I].

2. When supervising unqualified individuals, the supervising FAC(A)I shall be in the same section/flight element as the unqualified aircrew. The supervising FAC(A)I shall maintain a position to observe the training operation, and if required, assume control of the training operation, immediately "ABORT" the control, and/or "CHECK FIRE" supporting arms as appropriate.

3. When a FAC(A) or FAC(A)I is operating in a supervisory role, the supervising FAC(A)/FAC(A)I may log the same controls that the unqualified aircrew conducts and logs.

4. JCAS AP MOA JFAC(A). Units conducting FAC(A) training shall comply with JFAC(A) MOA requirements.

- a. The JFAC(A) MOA definitions and requirements as of this publication date are as follows [following list is not all-inclusive; see JFAC(A) MOA for comprehensive policy]:

- (1) FAC(A) Training Definitions:

- (a) Certified - individuals who satisfactorily complete the appropriate service academic and practical training requirements of a core FAC(A) training curriculum and complete a comprehensive assessment may be granted FAC(A) certification.

- (b) Qualified - a certified FAC(A) who has maintained currency by achieving the established minimum recurring training and assessment requirements in a specific aircraft type/model/series.

(c) Control - consists of at least one aircraft attacking a surface target. The control begins with a CAS briefing (the 9-line is the JP 3-09.3 standard) from a FAC(A) and ends with either an actual/simulated weapons release or an abort on a final attack run. For each CAS brief, no more than two controls can be counted per CAS Section.

(2) Failing to meet either proficiency or currency minimum requirements will result in a FAC(A) being non-qualified. To regain qualification, a FAC(A) must complete a requalification program IAW Service Directives that addresses the shortfalls from the previous six months. FAC(A)s who are unqualified for 18 consecutive months must regain qualification by completing a Service approved refresher syllabus and the minimum number of controls specified in the JFAC(A) MOA. Upon successful completion of a comprehensive re-qualification, the individual will be re-qualified as a FAC(A).

b. For a list of the specific control requirements, reference the current JFAC(A) MOA.

5. Loss of FAC(A) Qualification

a. Failure to meet JFAC(A) MOA proficiency or currency requirements, or loss of proficiency (delinquent re-fly factor) for all associated FAC(A) qualification events [per paragraph 215.2.a], constitutes loss of the FAC(A) qualification.

b. FAC(A) Requalification

(1) Aircrew who have lost the FAC(A) qualification due to failure to meet JFAC(A) MOA Proficiency or Currency requirements shall regain the FAC(A) qualification by successfully completing events as delineated in the appropriate T&R syllabus under the supervision of a qualified FAC(A). At a minimum, such aircrew must complete the number and category (appropriate night, control type, ordnance, etc.) of controls the individual failed to accomplish during the appropriate Currency or Proficiency period (Currency - 2 controls in 90 days. Proficiency - 6 controls in a six month period; 4 of these 6 controls must be Type I, 1 control must be at night, and at least 1 must control an asset that expends ordnance).

(2) Aircrew who have lost the FAC(A) qualification due to loss of proficiency (delinquent re-fly factor) for all associated FAC(A) qualification events [per paragraph 202.8.b.(1)], or who have been FAC(A) unqualified for 18 consecutive months per the JFAC(A) MOA, shall regain qualification by completing the appropriate Refresher FAC(A) syllabus under the supervision of a FAC(A)I and conduct a minimum of 6 controls (4 of these 6 controls must be Type I, 1 control must be at night, and at least 1 must control an asset that expends ordnance).

6. FAC(A) Documentation

a. Units shall maintain aircrew FAC(A) qualification letters, FAC(A)I designations letters, FAC(A) event ATFs, and FAC(A) academic training courses completed in Individual Performance Records per Chapter 2.

b. Units shall maintain a record of controls for all aircrew conducting FAC(A) training. At a minimum, the following information shall be included in the record of controls: 1) Date of controls; 2) Number of controls; 3) Type of control; 4) Day or night; 5) Ordnance used or simulated; 6) Type of aircraft controlled (fixed or rotary wing). The CAS log contained in the JFAC(A) MOA is the recommended format to record controls. (See Figure 3-1)

FORWARD AIR CONTROLLER (AIRBORNE) MISSION LOG FOR JOHN Q. PUBLIC								
DATE	RANGE NAME AND LOCATION	NUMBER AND A/C TYPE	TYPE OF ORDNANCE	NUMBER OF CONTROLS	TYPE OF CONTROL/ DAY/NIGHT*	CONTROLLER'S SIGNATURE	SUPERVISOR'S INITIALS	REMARKS
02 Feb 2001	Coleman, Ft Bragg NC	2 x A-10s	30MM MK-82	1	1/IR/N			
28 Feb 2001	Manchester, Ft Bragg NC	2 x F-16s	Dry	4	2/-/D			
10 Mar 2001	Shoal Creek, Ft Hood TX	2 x A-10s	BDU-33	2	1/LD/D			
22 Mar 2001	Coleman, Ft Bragg NC	2 x A-10s	AGM-65B	1	1/LD/N			

*This column should be completed in the following order: Type of Control/Type of Mark/Day or Night Mission. Controls: Type 1 Control = 1, Type 2 Control = 2, Type 3 Control = 3; Marks: Laser Designation = LD, IR = IR, White Phosphorous = WP, Red Phosphorous = RP, Illume = IL, Indirect Fire or Artillery = IF, No Mark = NA, Direct Fire = DF, Talk On = TO; Day = D and Night = N. Example: a Type 1 CAS mission using illume on deck during the daytime would be annotated as 1/IL/D.

Figure 3-1.--FAC(A) CAS Mission Log.

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CHAPTER 4

AVIATION FLYING SQUADRON TRAINING
CORE SKILL INTRODUCTION TRAINING

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CHAPTER 4

AVIATION FLYING SQUADRON TRAINING
CORE SKILL INTRODUCTION TRAINING

400. CORE SKILL INTRODUCTION/FRS TRAINING OVERVIEW

1. Definitions. Core Skill Introduction training consists of 1000 phase T&R training. Core Skill Introduction Basic POI training includes system/equipment operation familiarization, initial crew procedures, and initial exposure to Core Skills. Core Skill Introduction Refresher POI training include fundamental aircraft/system re-familiarization training. Core Skill Introduction Series Conversion POI training includes fundamental training required to fly/operate a new model/series aircraft/system that has significantly different aircraft or weapons systems characteristics. Core Skill Introduction Transition POI training includes fundamental training required to fly/operate a new type aircraft/system.

2. Marine Corps Fleet Replacement Squadrons (FRS), Aviation Training Units (ATUs), Transition Training Units (TTUs), aviation ground formal schools, civilian aviation schools, and CMC-designated operational commands conduct Core Skill Introduction training per community T&R manuals.

3. Personnel should be scheduled to complete 1000 Phase T&R events in sequential order to the greatest extent possible.

4. Commands responsible for overseeing Core Skill Introduction training shall provide a training environment where other billet responsibilities do not detract from that training.

5. Aviation Production Management (APM), a section within Training Command (TRNG CMD) G-3, is responsible for the management and oversight of USMC aviation production.

6. Core Skill Introduction Training Waivers/Deferments

a. Waived Syllabus Events. A commanding officer of an FRS/Core Skill Introduction training unit may waive one event for Transition/Model Conversion/Series Conversion individuals or individuals assigned to Refresher POIs when, in the CO's judgment, the previous experience or performance of an individual satisfies the requirement of the particular event. Basic T&R events shall not be waived for initial accession personnel. Waived events must be annotated in the PR/APR. Waivers for multiple events or complete stages of training shall be submitted via message to CG TECOM ATD VIA CG, TRNG CMD G-3 for review and authorization.

b. Deferred Syllabus Events. A commanding officer of an FRS/Core Skill Introduction training unit may defer one event for a student to operational units when, in the CO's judgment, a lack of a logistic support or training assets requires temporary exemption. Deferral of multiple events and/or complete stages of training require authorization from CG TECOM ATD VIA CG, TRNG CMD G-3. Gaining operational units must complete deferred training events in strict compliance with T&R event requirements. Training or NATOPS Officers shall annotate all deferred events in the PR/APR prior to the individual's transfer.

NOTE

The remaining paragraphs of this chapter pertain only to aircrew (remaining chapter policy is not applicable to aviation ground personnel).

c. Syllabus deviation approval authority. Syllabus deviations not covered above shall be submitted via message to CG TECOM (ATD) for review and authorization.

401. AIRCREW CORE SKILL INTRODUCTION PRODUCTION PROCESS

1. Annual Core Skill Introduction Production Cycle

a. Training Capacity. Training squadrons calculate and submit estimated annual training capacities for subsequent fiscal years to APM, Training Command (CG TRNG CMD) NLT 30 June. CG TRNG CMD G-3 validates and approves training capacity estimates.

b. Training Requirements. CG TRNG CMD G-3 consolidates all Marine Corps annual Core Skill Introduction training requirements from appropriate agencies and submits them to DC Aviation Plans and Policies (APP) and the Office of the Chief of Naval Operations (OPNAV N88) NLT 15 July. OPNAV publishes Navy and Marine Corps aviation training production requirements in the Naval Aviation Training Requirements Letter (TRL) NLT 31 July.

c. Aviator Production Plan. Chief of Naval Aviation Training (CNATRA), FRSs, CG TRNG CMD G-3, OPNAV, and BUPERS work together to develop the Integrated Production Plan (IPP) which defines the planned monthly input and output for every phase of Naval Aviator and Enlisted Aircrew production, API through FRS. The IPP is released NLT 1 October and is updated throughout the year.

d. Execution. The training units execute Core Skill Introduction training IAW the IPP throughout the fiscal year.

e. Assessment. CNATRA, CG TRNG CMD G-3, and Task Groups (Tactical, NFO, Rotary, Multi-Engine, Primary, and Enlisted Aircrew) conduct analysis of how the production process at each phase of Naval Aviator training is progressing via monthly, quarterly, and semi-annual meetings and conferences throughout the year.

2. Naval Aviation Production Process

a. The Naval Aviation Production Process (NAPP) is a Chief of Naval Operations (CNO) initiated program designed to improve the process of producing first tour Naval Aviators (NA), Naval Flight Officers (NFO), and Naval Aircrew (NAC) by targeting extended Time-To-Train (TTT) and identifying and removing barriers to production. NAPP is established and defined in OPNAVINST 3500.31 and in the NAPP SOP.

(1) CG TRNG CMD G-3 NAPP Representation. CG TRNG CMD G-3 shall remain actively engaged in the NAPP providing USMC representation in all Task Groups (TGs). CG TRNG CMD G-3 provides a unified USMC position to Commander, Naval Air Forces (CNAF) and CNATRA regarding NAPP issues.

(2) Wing NAPP Representation. Respective Wing Commanders shall appoint an officer as the Wing NAPP Representative to serve as a liaison between CG TRNG CMD G-3 and the FRS and to serve in the Production Planning Factor (PPF) validation/approval chain.

(3) Squadron NAPP Representation. Each FRS or designated Core Skill Introduction training unit will appoint both an officer and an enlisted aircrewman (as appropriate) as squadron NAPP Representatives. Squadron NAPP representatives are responsible for: NAPP Integrated Production Data Repository (NIPDR) inputs; PPF

development and submission; representation at monthly TG meetings and semi-annual Production Alignment Conferences (PAC); and other issues relating to the NAPP.

(4) NAPP Analyst Representation. Designated units shall incorporate contract NAPP Analysts (as appropriate) into the production process. Specifically, NAPP Analysts will support their respective FRS Commanding Officers in the following:

- (a) Command PPF Annual validation and submission.
- (b) Command annual flight hour budget planning, monthly allocation, and variance analysis.
- (c) Command Barriers to Production analysis and submission.
- (d) Command PAC alignment load sheets and IPP generation submissions in accordance with the Training Requirements Letter and Task Group Guidance.
- (e) Maintain and update current MCTIMS data bases for assigned FRS.
- (f) Command student training quality metric generation and variance analysis.
- (g) Provide Command analysis and recommendations regarding NAPP NIPDR charts and cost-wise metrics.
- (h) Coordinate with appropriate facility personnel for NAPP briefs.
- (i) Compile any necessary briefing products in the appropriate format for NAPP briefs.
- (j) Develop Command production plans, NAPP centric briefs and resource entitlements submissions.
- (k) Provide HQMC, TECOM, Training Command, Wing, MAG, CNAF, and CNATRA with supporting NAPP centric analysis.

b. The Naval Aviation Production Team (NAPT) is chartered by CNAF and chaired by CNATRA to oversee NAPP efforts that cover the entire process from "street to Fleet." The NAPT consists of all stakeholders that contribute to the production of Naval Aviators and Naval Aircrew; stakeholders include Navy Headquarters representatives, OPNAV, CG TRNGCMD G-3, MATSGs, and TGs representing each aviation community (primary, rotary, multi-engine, tactical, NFO, and Naval Aircrew). The FRSs play a key role in the NAPT as members of their respective TGs.

3. Command Relationships

a. CMC allocates aircraft, material, and personnel to meet current and anticipated long range USMC training requirements. CMC (MMOA-2) will staff FRS flight instructor billets per the Planning Production Factors (PPF). The optimum tour for a flight instructor is 36 months. CMC (MMOA-2) regards all tour lengths shorter than 24 months as an exception to this policy.

b. CG TECOM is responsible for managing training and education requirements of the Total Force.

(1) CG TRNG CMD G-3 is responsible for managing Core Skill Introduction training policy and requirements, tasking FRSs with training requirements, coordinating class schedules and seats in Marine Corps Training Information Management System (MCTIMS), and monitoring Core Skill Introduction training progression. CG TRNG CMD G-3 is the approval authority for FRS training. Operational units shall submit requests for Core Skill Introduction training by message. CG TRNG CMD G-3 serves as an advocate for FRSs, aviation ground/MACCS schools, and CMC designated operational commands conducting Core Skill Introduction training. As such, FRSs have been granted DIRLAUTH with CG TRNG CMD G-3 regarding all training matters.

(2) MATSGs support CG TRNG CMD G-3 by locally monitoring issues affecting USMC aviation training and providing face-to-face liaison with CNATRA. Responsibilities include promoting Marine Corps Aviation interests as representatives to CNATRA, serving as Marine Corps advocates at Navy FRSs, monitoring CNATRA production to meet FRS requirements, and acting as the conduit for FRS inputs to CNATRA Curriculum Review Boards.

c. MARFOR commanders support CG TECOM (ATD) and CG TRNG CMD G-3 for Core Skill Introduction training.

d. Wing Commanders have OPCON of subordinate FRSs and are responsible directly to their respective MARFOR commanders for execution of Core Skill Introduction training responsibilities.

(1) Wing Commanders are responsible for ensuring FRSs and designated operational commands under their authority receive the necessary support and assets to accomplish their training mission.

(2) Wing Commanders shall not task FRSs with flights/requirements that do not contribute to student training. Examples of these types of flights include the following: demonstration flights, staff flight time, static displays, VIP/administrative/logistic flights, and certain wing FRAGs. Any additional tasking that could impact an FRS's ability to make its annual training mission shall be requested via DMS message to CG TRNG CMD G-3.

e. Group Commanders shall provide FRSs with local maintenance and supply support on an equal basis with co-located operational squadrons.

(1) Commands responsible for overseeing Core Skill Introduction training shall provide a training environment where other billet responsibilities do not detract from that training. Individuals undergoing 1000 phase training should not be assigned unit T/O billet responsibilities or collateral duties until such training is complete.

(2) Commanders of operational squadrons conducting Core Skill Introduction training shall balance 1000 phase training responsibilities with operational responsibilities. Core Skills Introduction training will normally receive priority during peacetime operations.

(3) CMC designated operational commands authorized to conduct aircrew Core Skill Introduction training are as follows:

(a) MAG-24. MAG-24 is authorized to conduct CH-53E to CH-53D Series Conversion and CH-53D Refresher Core Skill Introduction training per the CH-53 T&R Manual.

(b) HMLA-773. HMLA-773 is authorized to conduct AH-1W and UH-1N Refresher Core Skill Introduction training per the AH-1W and UH-1N T&R Manuals.

(c) VMFT-401. VMFT-401 is authorized to conduct F-5 Basic (Conversion) and Refresher Core Skill Introduction training per the F-5 T&R Manual.

(d) VMGR-152, VMGR-252, VMGR-352. VMGR-152, VMGR-252 and VMGR-352 are authorized to conduct KC-130J Basic, Series Conversion, and Refresher Core Skill Introduction training per the KC-130J T&R Manual.

(e) VMGR-234, VMGR-452. VMGR-234 and VMGR-452 are authorized to conduct KC-130T Basic, Series Conversion, and Refresher Core Skill Introduction training per the KC-130F/R/T T&R Manual.

(f) VMX-22. VMX-22 is authorized to conduct MV-22B Basic; Transition, and Refresher Core Skill Introduction training per the MV-22B T&R Manual.

(g) MAG-16. The MAG-16 MV-22 Transition Training Unit (TTU) is authorized to conduct MV-22B Basic, Transition, and Refresher Core Skill Introduction training per the MV-22B T&R Manual.

(i) HMX-1. HMX-1 is authorized to conduct CH-46E Basic and Refresher Core Skill Introduction training for permanent personnel assigned to HMX-1, VH-3D/VH-60N Basic and Refresher Core Skill Introduction training, and MV-22B Refresher Core Skill Introduction Training for permanent personnel assigned to HMX-1 per the applicable T&R manuals.

(j) VMFAT-501. VMFAT-501 is authorized to conduct F-35 Core Skill Introduction training per the F-35 T&R Manual.

(4) CMC has authorized contract vendors to conduct Operational Support Airlift (OSA) aircrew Core Skill Introduction training.

(5) Operational Support Airlift (OSA) Core Skill Introduction Training

(a) CMC has approved Command Aircraft Crew Training (CACT) for CSII training.

(b) The Syllabus Sponsor shall not approve CACT Contract Simulator Instructor (CSI) personnel to conduct Model NATOPS evaluations. Marine Corps OSA aircrew NATOPS and Instrument Flight evaluations may be administered by Marine Corps OSA unit ANIs/NIs in CACT simulators supported by CSI operators, as long as the evaluatees have completed all required training, and the NATOPS open and closed book examinations prior to executing the NATOPS or Instrument evaluation.

402. FRS TRAINING CAPACITY

1. Proper management of Marine Corps aviation production requires that CG TRNG CMD G-3 continually reconcile FRS training requirements with FRS training capacity. Total training capacity of a squadron is calculated in terms of total numbers of Basic POI students a squadron can train per year, assuming the squadron only has to produce Basic POI students. CG TRNG CMD G-3 utilizes two methods to calculate training capacity at an FRS: the Replacement Aircrew (RAC) Equivalency Model and Production Planning Factors (PPFs). Although originally derived from the RAC Equivalency Model, it must be understood that the term RAC Equivalent (RE) is used in both the RAC Equivalency Model and PPFs to define capacity. The term RAC Equivalent means one complete Basic POI. If a squadron has a total capacity of 30

Basic POI students per year, then the squadron's capacity is 30 RE. To compute RE in PPFs, the CAT II-V requirements must be set to zero and only CAT I requirements entered. The comparative capacity of a squadron in terms of the other POIs will be covered in paragraph 402.2.

a. RAC Equivalency Model. The RAC Equivalency Model can be utilized to estimate FRS training capacity based solely on average aircraft assigned and average monthly utilization rate.

(1) Total Flight Hours per RAC Equivalent. The sum of the T&R 1000 Phase Basic POI hours and an overhead factor (usually about 20 percent of the syllabus hours) define the total flight hours per RAC equivalent. The overhead factor is a "cost of doing business" included to allow for required flights to conduct FRS training. Overhead flights include: IUT flights, incomplete flights, instructor NATOPS/instrument certifications, warm-up flights, post maintenance flights, ferry flights, and student syllabus refly. For example, if the total Basic syllabus hours equal 100, the total flight hours per RAC equivalent may be 120 hours (100 x 1.2). Actual Squadron overhead rates are contained in the Syllabus Overhead Allowance and Attrition Rates Letter released annually by OPNAV.

(2) Average Aircraft Assigned. Average aircraft assigned is the average number of aircraft expected to be in an "A" status for the year.

(3) Planned Aircraft Utilization Factor. The planned aircraft utilization factor is the number of hours a squadron plans to fly each aircraft per month, based on historical data, parts, and maintenance personnel available. WSPD and/or OP-20 limited utilization factors are not applicable.

(4) Training Capacity. FRS training capacity (estimated in terms of RAC Equivalency) can be determined by multiplying the average aircraft assigned, the monthly utilization factor, and 12 months (the product equals the estimated total annual flight hours for the squadron), then by dividing this product by the total flight hours per RAC equivalent. If the FRS average number of aircraft assigned is 10 and the planned utilization factor is 30 hours (using 12 months) the product is 3600 (10 x 30 x 12). Dividing 3600 by the total flight hours per RAC equivalent (i.e., 120 hours from paragraph (1) above) yields the FRS training capacity of 30 RE (3600/120 = 30).

b. Production Planning Factors (PPF)

(1) Where the RAC Equivalency Model calculates capacity based solely on an average monthly aircraft utilization factor, PPFs calculate capacity based on actual unit training days available, instructor manning and availability, daily aircraft availability, and simulator availability. The PPF system can also calculate backwards to facilitate identification of resource requirements in terms of instructors, aircraft, simulators, and flight hours needed to accomplish annual training requirements. PPFs provide the individual FRS, the Wing Commander and HQMC with a more detailed program planning and resource requirement determination process. PPFs are replacing the previously described RAC equivalency model as the primary tool for estimating capacity and resource shortfalls.

(2) OPNAVINST 3500.31 governs the utilization of PPFs with the exception of USMC planning assumption values. USMC FRSs shall use the following planning values when submitting annual calculations:

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Planned Annual Training/Fly Days	198 Days/Yr
Average Instructor Workday	8 Hrs/Day
Average Aircraft Workday	12 Hrs/Day
Pilot & NFO Instructor Availability	66 Percent
Flight Overhead Rates (Percent)	OPNAV ltr 3500 Ser N882B
Schedule Efficiency Index (Peacetime)	100 percent

Figure 4-1.--USMC FRS PPF Planning Values.

(3) FRS NAPP representatives shall submit squadron PPFs annually via WebPPF (www.nipdr.net/) through their USMC chain of command to CG TRNG CMD G-3 no later than 30 June. Submissions shall cover a three year period.

(4) RAC equivalency can be computed by entering double the anticipated CAT I requirement into WebPPF and entering zeroes for CAT II-V requirements. Doubling is necessary because the WebPPF model computes capacity up to, but no more than the entered requirement. For example, if a unit's actual capacity is 60 RE, but the CAT I requirement entered in WebPPF is only 50, WebPPF will compute the squadron capacity to be 50.

(5) Marine Corps FRSs will utilize PPFs as a source document to identify current and projected training requirement shortfalls to Wing (resource sponsor), CG TRNG CMD G-3 (FRS advocate), and CMC (resource provider).

(6) CG TRNG CMD G-3 shall provide validation and approval of Marine Corps FRS PPF submissions.

2. Managing the Load Plan. Regardless of whether the RAC Equivalency Model or PPFs are used to compute the total training unit capacity, NAPP Representatives can use that capacity in terms of Basic POI students and compute relative capacities in terms of other POIs.

a. RAC Equivalency (RE) Factor. RE Factors are critical in managing and adjusting training load plans while remaining within training unit capacity.

(1) A POI's RE Factor is determined by computing the ratio of the total 1000 Phase POI syllabus hours, including instructor aircraft hours for multi-plane flights, over the total 1000 Phase T&R syllabus hours of the Basic POI.

For example:

Aircraft T/M/S:	CH-XX
T&R Basic syllabus hours:	60
T&R Basic syllabus hours for flights requiring a separate instructor aircraft:	40
Total Basic syllabus hours:	100
T&R Refresher syllabus hours:	30
T&R Refresher syllabus hours for flights requiring a separate instructor aircraft:	25
Total Refresher syllabus hours:	55
CH-XX Refresher RE Factor:	$55/100 = .55$

(2) For NFOs and NAC, CG TRNG CMD G-3 computes RE Factor in a similar manner; as a decimal fraction of the Basic pilot POI using only those NFO/NAC flights that cannot be accomplished concurrently with a student pilot syllabus flight.

b. If the annual Basic POI training requirement for an FRS is 26 students and the FRS capacity is determined to be 30 RE, the squadron would have a remaining capacity of 4 RE for 100 level Transition, Series Conversion, and Refresher training ($30 - 26 = 4$). Using the above example and assuming no Transition or Series Conversion training requirements existed for the year, one could determine the Refresher training capacity by dividing the remaining RE capacity (4) by the Refresher RAC factor (.55) to obtain 7.3 Refresher students ($4 / .55 = 7.3$).

403. FRS TRAINING REQUIREMENTS

1. Marine Corps Aviation production requirements are developed based on Fleet requirements and are independent of FRS capacities.

2. CG TRNG CMD G-3 is responsible for consolidating MPP-30, ASM-2, MMOA-2, Security Cooperation Education and Training Center (SCETC), and 4th MAW inputs and submitting annual USMC FRS training requirements to HQMC APP and OPNAV. CG TRNG CMD G-3 will release an annual message NLT 31 August to the MARFORs, Wings, FRSs and MATSGs publishing the USMC FRS training requirements for the next fiscal year and projections for the subsequent seven years.

3. OPNAV consolidates all Navy and Marine Corps aviation training requirements in the annually released (NLT 30 September) Training Requirements Letter (TRL). The TRL provides an eight year outlook and serves three primary purposes:

a. As a long term budget planning document to ensure effective budget planning and resource allocation during the development of resource sponsors Program Objective Memorandums (POM) or Program Reviews (PR).

b. Provides an updated production requirement for the execution year. Adjustments are necessary due to the dynamic nature of the pilot, flight officer and enlisted aircrew end strength requirement.

c. Provides the USMC Fleet requirement to the NAPP. The Fleet requirement is the foundation for development of the Integrated Production Plan.

4. The annual Pilot Training Requirement (PTR), NFO Training Requirement (NFOTR) and Aircrew Training Requirement (ACTR) are grouped by types of students (listed below), indicating the source where the student came from. The category listed in parenthesis correlates the type of student to the training syllabus length. Training requirements for each type are obtained from the agencies listed.

a. Initial Accession. Initial accession (Category I) aviator and NAC production requirements are generated by MPP-30 based upon the existing Authorized Strength Report (ASR)/Grade Adjusted Recapitulation (GAR) and the Year-Group-Steady-State (YGSS) model.

b. Transition. Transition (Category I) aviator and NAC production requirements are generated by ASM-2 based on needs of the Fleet or as directed by HQMC (DC AVN). Candidates submit applications for NA/NFO Transition training per MCO 1331.2, Transition/Conversion Training for Naval Aviators and Naval Flight Officers.

c. Conversion. Conversion (Category II) aviator and NAC production requirements are generated by ASM-2 based on needs of the Fleet or as directed by HQMC (DC AVN). Candidates submit applications for NA/NFO Conversion training per MCO 1331.2, Transition/Conversion Training for Naval Aviators and Naval Flight Officers.

d. Refresher. Refresher (Category III) aviator production requirements are generated by MMOA-2 based on planned assignments and time out of the cockpit.

e. Modified Refresher. Modified Refresher (Category IV) aviator production requirements are generated by MMOA-2 based on planned assignments and time out of the cockpit.

f. Safe-for-Solo Programs. Safe-for-Solo programs (USN Category V) pilot production requirements are generated by MMOA-2 based on planned assignments and time out of the cockpit.

g. Foreign. Foreign aircrew are based on Foreign Military Sales (FMS) requirements. Foreign student POI requirements may be anything from a Category I to a Category V, but are usually classified as a Category V on the TRL for tracking purposes. Annual training requirements are generated by the SCETC under CG TECOM.

5. CG 4th MAW shall submit an estimate of FRS training requirements by T/M/S and POI for the next 3 fiscal years to CG TRNG CMD G-3 by 30 May annually.

6. FRS production requirements are programmed by CG TRNG CMD G-3 and submitted to OPNAV via the TRL. FRS flight hours are derived from the annual TRL, syllabus flight hours, and overhead data. CG TRNG CMD APM shall ensure OPNAV has accurate syllabus flight hours and overhead data to compute FRS flight hour requirements. Flight hour management is the responsibility of the respective wing commanders.

7. Assigning flight hours for CAT III and IV refresher training requires both MMOA input and the application of historical usage data. In order to correctly project required flight hours, FRS Commanding Officers will provide updated historical usage data annually, by 15 February.

404. AVIATOR PRODUCTION PLAN

1. Integrated Production Plan (IPP)

a. The IPP is the annual reconciliation of all NAPP training and the official plan for the NAPP to meet Fleet aviation production requirements. It defines the required monthly input and output for each phase of NAPP training, API through FRS. The document is owned and managed by CNATRA.

b. The IPP is developed on a pull system from the top down, where each stage of aviation training, starting with the FRSSs, defines their monthly input requirements to meet output requirements. Once FRSSs have solidified their plans in the IPP, CNATRA works backwards through each stage of training, from Advanced back to API, developing the monthly flow of Naval Aviation students into the IPP. This process integrates each stage's outputs with the subsequent stage's input requirements.

2. Aviation Production Conference (APC)

a. The purpose of the APC is to provide Marine Corps FRSSs a forum to address training issues and raise awareness of all participants to issues impacting Marine

Corps aviation training. It is an opportunity for Marine Corps Aviation to address any problems with the production plan prior to the PAC.

b. Attendees should include representatives from each FRS or equivalent training unit that produces Marine Corps aviators, the MATSGs, HQMC agencies, MAGs, WINGs, OPNAV, and senior Marines from CNATRA and CNATT.

c. CG TRNG CMD G-3 hosts a Fall and a Spring APC each year.

(1) Focus of the Fall APC is to assess current fiscal year aviation production, confirm plans to meet the next fiscal year's aviation production requirements, address training issues impacting aviation production, develop or modify mitigation strategies, and solidify an overall Marine Corps aviation production course of action before attending the Fall PAC. Prior to the APC, FRSs will use the next fiscal year's training production requirements to develop a Fiscal Year Load Plan and any training requirement conflicts with FRS capacity will be documented and prepared for brief at the APC.

(2) Focus of the Spring APC is to conduct a mid-year review, focusing on updating training issues impacting aviation production and verifying progress and effectiveness of mitigation strategies. Mitigation strategies will be developed and/or modified as necessary and the overall Marine Corps aviation production course of action will be updated prior to the Spring PAC.

d. Results of the APC are released by CG TRNG CMD G-3 in an After Action message which lists issues and mitigation strategies and identifies tasks for specific agencies.

3. Production Alignment Conference

a. CNATRA hosts a PAC twice per year. The PAC provides a forum for CG TRNG CMD G-3, FRS, Task Group (Primary, Tactical, Rotary, Multi-Engine, NFO, and Enlisted Aircrew), CNATRA production managers, HQMC, CNAF, CNAL, and BUPERS representatives to assess and resolve Integrated Production Plan issues or discrepancies.

b. Attendees include the NAPP Officers from each FRS, CNATRA and CNATT staff, and representatives from CG TRNG CMD G-3, MATSGs, HQMC, CNAF, CNAL, OPNAV, and BUPERS.

c. Focus of the Fall PAC is to assess current fiscal year aviation production, coordinate as Task Groups on plans to make up any current year shortfalls/meet the next fiscal year's aviation production requirements, and to finalize the FRS level Integrated Production Plan.

(1) Prior to the Fall PAC, Task Group and FRS production managers develop a draft of the FRS-level IPP which is submitted to CNATRA. The intent is for CNATRA to have enough time to develop an initial draft of the entire IPP before the PAC.

(2) During the PAC, issue resolution and changes to the higher levels of the IPP may occur. Any changes can take time to reconcile down through API, so the IPP may or may not be completed during the PAC.

d. The result of the PAC is a finalized IPP that is published by CNATRA on its website.

4. Marine Corps Training Information Management System (MCTIMS)

a. MCTIMS is a web-based training management system that consolidates the functions of and replaces the Training Requirements and Resource Management System (TRRMS) and By-Name-Assignment (BNA). It is the user interface that allows all training schools to program dates to respective classes and seats.

b. Manpower/training managers at all levels in the Marine Corps can log into MCTIMS, look up courses and dates, and assign Marines to training seats in order to generate orders. If a course is funded by TECOM Financial Management (FM), name assignment in MCTIMS must be completed before appropriation data can be requested. Course seat management, including schedule building and name assignment, can be accessed via the Student Registrar menu in MCTIMS. All schoolhouses that train Marine Corps students are required to use Student Registrar per MCO 1553.2. For setting up access to the Student Registrar or for assistance using it, contact TECOM Formal Schools Training Branch (C4611) at 703-432-0071 or DSN 378-0071.

c. Per the AIRS checklist, each FRS or equivalent Marine Corps training unit is responsible for maintaining a MCTIMS account and shall appoint a MCTIMS account manager to build and update the unit's schedule. The subsequent fiscal year's class schedules are due into MCTIMS NLT 31 July each year. Class schedules are always susceptible to change and dates can be updated in MCTIMS at any time, but preliminary schedules must be entered by 31 July in order for manpower/training managers to be able to assign students and generate orders in September for October classes. Once the official IPP is released after the Fall PAC, MCTIMS managers shall ensure class schedules in MCTIMS are updated to match the IPP.

d. Refresher students shall be registered in MCTIMS by their sponsoring unit (e.g. MMOA or MAG) in order to be scheduled for training. Prioritization of available class seats is the responsibility of the gaining MAG or MAW. Any requests to add class seats shall be made through CG TRNG CMD G-3 copy to DC AVN, ASM-52. FRSs shall ensure that all students are registered in MCTIMS prior to start and that the student's status is updated to reflect the completion of their training when applicable.

405. AIRCREW CORE SKILL INTRODUCTION REFRESHER TRAINING

1. Pilots and NFOs who have not flown the model aircraft within the prescribed time intervals defined below (also see figure 4-2) shall complete the appropriate Core Skill Introduction Refresher training program.

a. CMC designated FRSs and operational commands shall conduct Core Skill Introduction Refresher training; such training shall be specified in individual T&R manuals. Upon completion of Core Skill Introduction Refresher training, pilots and NFOs are normally assigned to the Refresher POI conducted at the tactical squadron.

b. Pilots and NFOs who have been selected for Transition/Model Conversion/Series Conversion shall be assigned to the appropriate Basic, Transition, or Series Conversion POI per Chapter 2, regardless of time out of cockpit.

2. Aircrew Core Skill Introduction Refresher Training Programs

a. Full Refresher Programs. Full Refresher programs (USN CAT III syllabi) consist of appropriate ground school, simulator and training events, plus a NATOPS check in model. Pilots and NFOs returning to a DIFOP billet, who have been DIFDEN

or DIFOP (out of type) for greater than 730 days shall receive Refresher/CAT III training.

b. Modified Refresher (MRF) Programs. MRF Programs (USN CAT IV syllabi) consist of appropriate ground school/simulator training plus 10 hours of flight time and a NATOPS check in model. CG TECOM ATD will consider additional training for individuals in this program on a case-by-case basis when requested by the unit commander.

(1) Pilots and NFOs returning to a DIFOP billet, having previously held an MOS, having flown their type but not model aircraft within the past 485 days shall receive MRF or CAT IV training at an FRS. (Examples of this type of Refresher training are: MOS 7523 NATC T-45 instructor returning to fly an F/A-18; MOS 7565 NATC TH-57 instructor returning to an AH-1 billet; MOS 7557 NATC T-44 instructor returning to fly a KC-130.)

(2) Pilots and NFOs assigned to "Dual Control Aircraft" who have been DIFDEN or DIFOP (out of type) longer than 485 days but less than or equal to 730 days will receive MRF or CAT IV training at an FRS.

(3) Pilots and NFOs assigned to "Single Control Aircraft" who have been DIFDEN or DIFOP (out of type) for 486-730 days will receive a MRF program.

(4) Pilots and NFOs destined for PCS to 1st MAW may receive a MRF upon approval by CG TRNG CMD G-3. CG 1st MAW may request other tactical jet training for inbound pilots or NFOs from CMC (MMOA).

c. Safe-for-Solo Programs. Safe-for-Solo programs (USN CAT V) apply only to "Single Control Aircraft" pilots and consist of ground school, simulator training plus a NATOPS check in model. Pilots assigned to "Single Control Aircraft" who have been DIFDEN or DIFOP (out of type) longer than 365 days but less than or equal to 485 days shall receive FRS Safe-for-Solo training.

3. The CMC may designate HMX-1 as a Refresher training squadron for CH-53E and CH-46E aircraft in exceptional situations.

4. Commands may request Core Skill Introduction Refresher training for aircrew not covered by the previous Refresher training programs. Requesting units should make requests to CG TRNG CMD G-3 via the chain of command and should include at a minimum the reasons for the Refresher training, time out of model/type, periods of availability, and type training desired.

5. CG 4th MAW may request authorization via MCTIMS for FRS instructors to designate and annually certify 4th MAW squadron instructor pilots to provide appropriate Refresher training for SMCR aircrew on a case-by-case basis. CG 4th MAW shall coordinate such requests with HQMC [DC AVN (ASM)] and CG TRNG CMD G-3 via message.

Aircrew Returning from:	Time out of Model:	Training Required:	Training Conducted at:
DUAL CONTROL ACFT DIFDEN or DIFOP (Out of Type)	< 485 days	Per T/M/S T&R Manual	Tactical Unit
	486-730 days	Modified Refresher CAT IV	FRS *
	> 730 days	Refresher CAT III	FRS *
SINGLE CONTROL ACFT DIFDEN or DIFOP (Out of Type)	< 365 days	Per T/M/S T&R Manual	Tactical Unit
	> 365 days but < 485 days	Safe-for-Solo (Pilots Only)	FRS *
	486-730 days	Modified Refresher CAT IV	FRS *
	> 730 days	Refresher CAT III	FRS *
DIFOP (In Type)	< 485 days	Per T/M/S T&R Manual	Tactical Unit
	> 485 days	Modified Refresher CAT IV	FRS *
* Or CMC designated operational command authorized to conduct 1000 Phase Refresher training.			

Figure 4-2.--Aircrew Refresher Training Matrix.

NOTE

CG TECOM ATD is approval authority for deviations from above matrix.

406. ASSESSMENT AND REPORTING

1. Proper management of Marine Corps aviation resources requires that CG TECOM ATD continually evaluate FRS training requirements and resources to make short range and long range adjustments to maintain a balance between requirements and capacity.

2. FRS Reporting. Many unforeseeable factors affect the training requirements and capacity during the execution of the annual NA/NFO Training Plan via the IPP. The monthly FRS planning and reporting cycle allows adjustments to maintain alignment of training requirements and capacity.

a. Assessments of actual training production compared to the IPP are conducted via teleconference, VTC, or face-to-face briefs monthly. The system utilized to capture monthly data and generate cockpit charts for briefing and assessment is the NAPP Integrated Production Data Repository (NIPDR). The NIPDR cockpit charts are a useful tool in evaluating FRS production performance and capability.

b. Each FRS or equivalent training unit is responsible for submitting unit production data into NIPDR by the 6th of each month. CNATRA will then generate cockpit charts from the data for briefs later in the month.

(1) Pools. The FRS reports two pools to NIPDR: Preload and Students-In-Training (SIT). The FRS Preload is an entitlement (7 weeks) defined as the number of CAT I winged pilots and NFOs that have not commenced their FRS class. This includes personnel conducting PCS moves, training en route (SERE, etc.), and at the

FRS awaiting class start. The SIT pool includes all students who have started a POI. A POI includes any ground training.

(2) Joint FRS Reporting. FRSs that train both Navy and Marine Corps students will report both Navy and Marine Corps student numbers into NIPDR each month.

c. Task Group meetings take place monthly via teleconference, VTC, or face-to-face meetings. Task Groups include the Commodore in charge, TG production managers, and all FRSs and equivalent training units associated with the Task Group. The focus of the meetings is to assess current production to date, identify any problems associated with meeting fiscal year training requirements, develop mitigation strategies, update long term plans, and prepare for the NAPT meeting later in the month.

(1) TG Tactical (TGTAC)/TG Naval Flight Officer (TGNFO). TGTAC includes all Navy and Marine Corps units associated with jet aircraft pilot production. TGNFO is directly associated with jet training units and attends the same meetings, but has a separate Training Wing and Commodore in CNATRA.

(2) TG Rotary. TG Rotary includes all Navy and Marine Corps units associated with rotary wing and tilt rotor pilot production.

(3) Multi-Engine TG (METG). METG includes all Navy, Marine Corps, and Air Force units associated with Multi-Engine fixed wing pilot production as well as intermediate level flight training for tilt-rotor pilots.

(4) Primary Production TG (PPTG). PPTG includes all Navy and Marine Corps units associated with API and Primary pilot flight training production.

(5) TG Naval Aircrew (TGNAC). TGNAC includes all Navy and Marine Corps units associated with aircrew production.

d. The NAPT (described in paragraph 401.2.b) meets monthly via VTC with a teleconference dial-in capability. The monthly meeting focuses on assessing current production to date, informing CNATRA and CNAF on problems associated with meeting fiscal year training requirements, describing mitigation strategies, and updating long term plans.

(1) CG TRNG CMD G-3 attends the NAPT to represent Marine Corps FRSs and Marine Corps Aviation interests. MATSGs, FRSs, and HQMC agencies are welcome to attend.

(2) Actions-In-Progress (AIPs) generated by the NAPT involving Marine Corps production will be staffed through CG TRNG CMD G-3.

3. Attrition/Training Delay Notification. FRSs and equivalent training units training Marine aircrew are responsible for notifying CG TRNG CMD G-3 of RAC attrition/delay issues that occur. CG TRNG CMD G-3 needs to be informed of any student attrition or delays due to medical, legal, or performance issues. Notification shall be accomplished through the comments section in the monthly NIPDR submissions and discussion in Task Group meetings.

4. Mishap Notification

a. FRSs and equivalent training units training Marine aircrew are responsible for notifying CG TRNG CMD G-3 of any mishaps that occur involving RACs or impacting

training production. The following PLADS shall be included on OPREP3s and MDRs:
CG TECOM QUANTICO VA G3; CG TECOM QUANTICO VA ATD.

b. CG TRNG CMD G-3 shall not be included in the privileged investigation messages. Neither TECOM ATD nor TRNG CMD G-3 have a permanent ASO billet on its T/O.

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CHAPTER 5
T&R ADMINISTRATION

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CHAPTER 5

AVIATION T&R ADMINISTRATION

500. PURPOSE. To provide a process for developing, updating, and staffing T&R manuals.

501. SYLLABUS SPONSOR. A syllabus sponsor is a unit that coordinates T&R changes on behalf of the applicable community in coordination with CG TECOM ATD. Syllabus sponsors shall maintain close liaison with their respective community counterparts. CG TECOM ATD generally assigns sponsorship to MAWTS-1 or a training unit, but may designate a unit from the Total Force or supporting establishment for certain aircraft/systems/MOSs.

502. T&R MANUAL DIRECTORY

1. Aviation T&R syllabi are organized into a series of manuals produced as Navy Marine Corps (NAVMC) Publications. The following matrix contains a list of aviation T&R syllabus sponsors. For an up-to-date listing of T&R manuals, refer to the TECOM ATD website at

<https://www.intranet.tecom.usmc.mil/hq/branches/atbl/default.aspx>

CATEGORY	AVIATION T&R MANUALS	SPONSOR
Policy and Procedures		
Aviation T&R Program (Overarching Policy)	MCO 3500.14	CG TECOM ATD
Aviation T&R Program Manual (Procedures)	NAVMC 3500.14	CG TECOM ATD
Tactical Fixed Wing		
AV-8B	NAVMC 3500.51A	MAWTS-1
EA-6B	NAVMC 3500.1A Ch 1	MAWTS-1
FA-18A/C/D	NAVMC 3500.50A Ch 1	MAWTS-1
KC-130T	NAVMC 3500.52	MAWTS-1
KC-130J	NAVMC 3500.53	MAWTS-1
F-35B	NAVMC 3500.XX	MAWTS-1
Tiltrotor		
MV-22B	NAVMC 3500.11A Ch 1	MAWTS-1
Tactical Rotary Wing		
CH-46E	NAVMC 3500.46A Ch 1	MAWTS-1

CATEGORY	AVIATION T&R MANUALS	SPONSOR
CH-53D/E	NAVMC 3500.47A	MAWTS-1
AH-1W	NAVMC 3500.48	MAWTS-1
UH-1N	NAVMC 3500.49	MAWTS-1
UH-1Y	NAVMC 3500.20A	MAWTS-1
AH-1Z	NAVMC 3500.104	MAWTS-1
Tactical UAS Communities		
RQ-7B UAS	NAVMC 3500.34A	MAWTS-1
Group 1 UAS T&R Manual	NAVMC 3500.107	MARSOC
Support Aircraft		
C-9	NAVMC 3500.31	VMR-1, MCAS Cherry Point
UC-12B/F	NAVMC 3500.30A	MCAS New River
UC-12W	NAVMC 3500.102	VMR Det New Orleans
HH-46 (SAR)	NAVMC 3500.21	VMR-1, MCAS Cherry Point
HH-1N (SAR)	NAVMC 3500.91	H&HS SAR, MCAS Yuma
UC-35	NAVMC 3500.92	VMR Det Andrews
C-20	NAVMC DIR 3500.96	MCAF Kaneohe Bay, HI
F-5E/N	NAVMC 3500.83	VMFT-401
Aviation Ground Operations		
Marine Tactical Air Command Squadron (MTACS)	NAVMC 3500.81	MAWTS-1
Tactical Air Operations Center (TAOC)	NAVMC 3500.43	MAWTS-1
Marine Air Traffic Control (MATC)	NAVMC 3500.94	MAWTS-1
Direct Air Support Center (DASC)	NAVMC 3500.95	MAWTS-1
Low Altitude Air Defense (LAAD)	NAVMC 3500.57	MAWTS-1
Meteorological Oceanographic (METOC)	NAVMC 3500.38	MAWTS-1

CATEGORY	AVIATION T&R MANUALS	SPONSOR
Airfield Emergency Services (AES)	NAVMC 3500.45	EAF - MATSG-21, AMS-1, NAS Pensacola, FL ARFF - MARCORDET Goodfellow, San Angelo, TX EAF/FES Officer, MAWTS-1
Aviation Operations Specialist (AOS)	NAVMC 3500.96	AOS, MATSG-21, MATSS-1, (MAWTS-1 Summer 2011)
Aviation Ground Maintenance		
TACC 5900 Maintenance	NAVMC 3500.73	MAWTS-1
TAOC 5900 Maintenance	NAVMC 3500.74	MAWTS-1
DASC 5900 Maintenance	NAVMC 3500.75	MAWTS-1
MATC 5900 Maintenance	NAVMC 3500.76	MAWTS-1
METEM (METOC)	NAVMC 3500.62	MAWTS-1

503. T&R CHANGES

1. T&R Conference

a. A T&R conference is an in-person forum to comprehensively revise a T&R manual and results in the production of a new version of the T&R manual (e.g., NAVMC 3500.XX"B"). T&R conferences convene on a triennial schedule. However, T&R conferences may be convened as needed or when higher headquarters directs. Optimally, T&R conferences and Training Management Team (TMT) conferences should be conducted back-to-back in the interest of fiscal efficiencies.

b. T&R Pre-Conference. In advance of a T&R conference (normally 3 months prior), a T&R pre-conference is conducted to coordinate and build a foundation and draft/template in advance for the conduct of the Formal T&R conference. The preconference may be an in-person forum for the syllabus sponsor and CG TECOM ATD, and could include SMEs as needed. The determination of whether or not a pre-conference is necessary will be determined on a case by case basis. If no changes are going to be made to the Core METs, Core Plus METs, or MET worksheets then a pre-conference might not be necessary. The final determination will be made by the syllabus sponsor and the head of the Policy Section within ATD. Details are provided in paragraph 504 below.

2. Correspondence T&R changes. A correspondence T&R change is a change to an existing manual between T&R conferences. T&R correspondence changes are conducted

via electronic means and produce changes to existing T&R manuals (e.g., NAVMC 3500.XX, "Ch 1") or new versions as in paragraph 1 above. In some communities, this process may suffice on a continuous basis in lieu of a conference.

504. T&R CONFERENCE PROCEDURES

1. Pre-Conference Procedures

a. ATD Responsibilities

(1) Pre-Conference Date. Coordinate with syllabus sponsor to determine a T&R pre-conference date (duration depends on extent of revision). The pre-conference should occur at least 3 months prior to the conference.

(2) Participants. Syllabus sponsor and ATD SMEs. Community SMEs from other units as required or desired, such as participation by FLSE Model Managers.

(3) Announcement Message. Prepare and release a message to appropriate commands and syllabus sponsor with an information copy to CMC (DC AVN). This message announces the purpose of the pre-conference and includes the required METL review POA&M, convening location/date, and requests the submission of agenda items in "Item, Discussion, Recommendation" format. This message will be released 2 months before the pre-conference date.

b. Syllabus Sponsor Responsibilities

(1) Research and consolidate a list of formal courses (i.e. MSTC, Marine Net, etc).

(2) Evaluate applicability of training events from other community T&Rs.

(3) Verify all references.

(4) Ensure all device nomenclature are accurate.

(5) Gather all training governing directives applicable to the community.

(6) Verify core skill introduction content with appropriate training activity.

c. Small Unmanned Aircraft Systems (Group 1 UAS) T&R Manuals - Syllabus Sponsor and ATD Responsibilities. In the case of Group 1 UAS T&R Manuals, ATD and the Syllabus Sponsor will task organize as required to ensure the tasks per paragraph 504.1.b above are accomplished.

d. Pre-Conference Agenda. The following items will be addressed at the pre-conference:

- (1) How to run a T&R Conference
 - Program Manual Brief
 - What is directed by DC AVN and TECOM
 - Core Model Brief
 - T&R Rules and M-SHARP implementation - (prerequisite, chaining, POI updating, attain, maintain tables)
 - Determine tasks to be completed and assign who is to complete them, and due dates per Chapter 5
 - Review importance of matrix vs narrative reconciliation.

Review of agenda items.

- (2) Review of Chapter 1
Review and validate MCTs including Conditions and Standards
T/O - verify current number per MCTFS
Output Standards as noted in the MCT
Core Skills & CMMR
Mission Skills & CMMR
Core Plus (Skills & Missions) & CMMR
MET to Core/Mission/Core Plus matrix
Combat Leadership & CMMR
Instructor & CMMR
Resource Requirements as applicable
- (3) Review of the Core Model
POIs (Basic, Conversion, Series Conversion, Transition, & Refresher,
Flight Leadership and Maintain
Training Progression Model
Attain Rules
Maintain Rules
Prerequisite Rules
POI updating Rules
Chaining Rules
Requirements, Certifications, Qualifications, & Designations
Syllabus Matrix
Attain & Maintain Tables
Ordnance Matrix
- (4) Deliverables at the conclusion of the Pre-Conference
MCT change message to MARFORS if required
Current T/O number per MCTFS and corresponding manpower numbers
Task organization tables
MET output standards
Core, Mission, Core Plus CMMR
Combat Leadership CMMR
Instructor CMMR
Identification of types of resource requirements as applicable
Conference summary letter that serves as a record of proceedings that
addresses key issues discussed during the pre-conference, and list of
attendees (Required for Aviation Ground communities).
Shell of messages for T&R pre-conference results

2. Formal T&R Conference Procedures And Responsibilities

a. Syllabus Sponsor and ATD

- (1) Conference Date. Coordinate a T&R conference date. The conference occurs 3 months after the pre-conference. Conference duration is normally 3 to 5 days.
- (2) Announcement Message. This message will be sent to the appropriate commands with an information copy to CMC (DC AVN). It announces the purpose of the conference and includes results of the pre-conference. In addition, the message announces the conference convening location/date, identifies units required to nominate voting members, and requests a follow-on submission of agenda items in "Item, Discussion/Recommendation" format. ATD will release the announcement message 3 months before the conference convening date.

(3) Conference Agenda Message. Consolidate agenda items and release a message to MARFORs/MCIs as required, MAWTS-1, DC AVN, and all appropriate commands operating/implementing the applicable syllabus. ATD will release the agenda items message 1 month before the conference convening date.

b. ATD

(1) Release announcement and agenda items messages.

(2) Conference Funding. CG TECOM ATD shall provide appropriation data funding to voting representatives per MCO P7100.8. Additional conference representatives are encouraged to attend, but must be unit funded. Intelligence battalions are encouraged to fund their METOC personnel to attend T&R conferences.

c. Syllabus Sponsor. Facilitate the conference and ensure each attendee has access to a draft version of the T&R at the completion of the conference or as soon as possible thereafter.

d. Commands Providing Conference Representatives

(1) Nominate representatives to CG TECOM ATD via message or e-mail NLT 45 days prior to the conference. Responsible commands nominating representatives are COMMARFORCOM, COMMARFORPAC, COMMARFORRES, MAW Commanding Generals, COMMARCORBASJAPAN; MCI EAST, MCI WEST; and applicable schools as nonvoting members. Conference representatives shall be experienced in the day-to-day supervision of the applicable aviation training program being reviewed.

(2) Submit agenda items to the syllabus sponsor in "Item, Discussion, Recommendation" format via message no later than 45 days prior to the conference convening date.

e. All attendees shall be familiar with agenda items and review the applicable T&R syllabus prior to the conference. Voting members shall staff agenda items and have established command positions prior to attending a conference. As front-end agenda staffing facilitates the T&R update process, syllabus sponsors should not accept additional agenda items during T&R conferences.

f. Voting Member Procedures

(1) Any conference attendee may recommend a specific position, but it is the voting representatives who decide T&R content. Agencies providing voting representatives include CG MCCDC, MARFORs, and MAW Commanding Generals; in addition MCI EAST, MCI WEST, and COMMARCORBASJAPAN shall also provide voting members for ATC, METOC, ARFF, EAF, OSA, SAR and AOS T&R manual reviews.

VOTING MEMBERSHIP (AVIATION TACTICAL FLYING)				
MCCDC (ATD)	MARFORCOM	MARFORPAC	MARFORRES	1 ST MAW
2 ND MAW	3 RD MAW	4 TH MAW		
VOTING MEMBERSHIP (AVIATION OSA FLYING)				
MCCDC (ATD)	MARFORCOM	MARFORPAC	MARFORRES	CG MCI EAST
COMMARCORBASESJAPAN	MCI WEST			
VOTING MEMBERSHIP (Group 1 UAS)				
MCCDC (ATD)	MARFORCOM	MARFORPAC	MARFORRES	
MARSOC	1 ST MARDIV	2 ND MARDIV	3 RD MARDIV	4 TH MARDIV
VOTING MEMBERSHIP (AVIATION GROUND)				
MCCDC (ATD)	MARFORCOM	MARFORPAC	MARFORRES	1 ST MAW
2 ND MAW	3 RD MAW	4 TH MAW		
MCI (ATC/ARFF/EAF/METOC/AOS)	COMMARCORBASESJAPAN (ATC/ARFF/EAF/METOC/AOS)			

(2) At the conference, voting members and attendees shall complete, at a minimum the following tasks:

(a) Review, discuss and vote on agenda items.

(b) Review/validate/modify the following:

1 Unit Core Competency Information (Mission Statement/METL/Output Standards/CMMR/Attain and Maintain table, Certification, Qualification & Designation tables/Training Progression Models).

2 Programs of Instruction.

3 Syllabus Phase/Stage/event information

4 Training resource requirements.

5 Required T&R matrices/tables.

6 T&R syllabus evaluation forms.

7 Training Device Event Essential Subsystem Matrix (EESM)

(c) Ensure their respective T&R manual is formatted in compliance with Chapter 6.

(d) Coordinate syllabus requirements with other aircraft/aviation ground communities, as required.

(3) T&R Conference Outline and Schedule of Events Model. This model serves as a guide and template for the conduct of a T&R conference. It may be tailored as required to meet the needs of the applicable community.

DAY 1

Welcome - Syllabus Sponsor
Provide a synopsis of MAB, OAG and TMT pertinent issues -
Syllabus Sponsor
Program Manual - ATD
Core Model - ATD
 Attain/Maintain - ATD
 Prerequisites - ATD
 Chaining - ATD
 External Resources - ATD
Goals of T&R review - Syllabus Sponsor
Agenda items - Review, discuss, vote - Syllabus Sponsor
Assignment of breakout groups (as needed).

Day 2

Construction of new stages or events
Concentration on event specific requirements
 Ground/Academic
 POI assignment
 Equipment (aircraft/PEIs/simulator)
 Mirror codes
 Certifications/Qualifications/Designations
 E-coding
 Events:
 Goal
 Requirement
 Performance Standard
 Prerequisite
 Instructor
 Ordnance
 Ranges
 External syllabus support
 Chaining

Day 3-5

Continuation of day 2 activities until complete
How to review T&R (syllabus matrix against event narrative)
Assignment of deliverables with specific due date(s)
Out brief
Conference summary letter that serves as a record of proceedings
that addresses key issues discussed during the conference, and
list of attendees (Required for Aviation Ground communities).

3. Post Conference Responsibilities

a. Syllabus Sponsor

(1) Coordinate with CG TECOM ATD to prepare a conference report message to the MARFORs. CG TECOM ATD shall release the conference report message within 1 month of conference completion. Conference report messages shall delineate significant change recommendations.

(2) Submit the draft T&R Manual to CG TECOM ATD in the format prescribed in Chapter 6. The syllabus sponsor is responsible for all content (text and tables), to include accuracy and reconciliation between the T&R matrices and the event descriptions to ensure alignment.

(3) Coordinate with CG TECOM ATD to prepare a MARFOR concurrence message for the completed draft T&R manual.

Note: Both the conference report and the request for concurrence messages can be combined if the draft T&R is complete.

b. ATD

(1) Coordinate with the syllabus sponsor to prepare and release conference report message(s) to the MARFORs in accordance with the timeline listed in paragraph 503.3a above.

(2) Upon receipt of the draft T&R Manual from the syllabus sponsor, conduct a quality assurance check to ensure the draft complies with the provisions of this Manual, particularly Chapters 2 and 6.

(3) Staff the draft to M-SHARP representatives and Aviation Training System (ATS) section prior to release to the MARFORs for concurrence.

(4) Submit MARFOR concurrence request message. MARFORs will concur or not concur with justification via message within 1 month upon receipt of the message.

(5) Simultaneously with the MARFOR concurrence request above, coordinate with DC AVN to request validation of Chapter 1 as being in compliance with DRRS requirements.

(6) Forward the consolidated MARFOR comments, the draft T&R manual and any other documentation to CMC (DC AVN). Unresolved issues shall be forwarded to CMC (DC AVN) for decision. DC AVN is requested to respond within 1 month upon receipt of an ATD request for T&R manual concurrence.

(7) Upon MARFOR and DC AVN concurrence, release a message approving the T&R syllabus for interim use. Post the interim approved T&R manual to the CG TECOM ATD website; interim T&R manual supersedes all previous versions of the subject T&R.

(8) Attach DC AVN and MARFOR comments and forward the interim approved T&R manual to CG TECOM for signature.

(9) When the NAVMC (Interim approved T&R manual) is signed by CG TECOM, release a message announcing that the NAVMC has been approved and now replaces the interim T&R manual. Post the NAVMC to the CG TECOM ATD website. Coordinate with CMC (ARDE) to coordinate posting to the HQMC website.

c. Voting Members. T&R review voting representatives shall brief their respective commands on post conference results.

d. MARFORs. Consolidate comments from subordinate units and concur or non-concur with justification to CG TECOM ATD via message NLT 1 month from receiving a request for concurrence.

e. CMC (DC AVN)

(1) Review the proposed draft T&R Manual and concur or non-concur with justification to CG TECOM ATD via message NLT 1 month after receipt of draft T&R manual from ATD.

(2) Review and validate chapter 1 of the draft T&R Manual as being in compliance with DRRS requirements.

4. Oversight. ATD will maintain contact with syllabus sponsors to ensure the timeline for the process outlined for Post Conference Responsibilities is closely adhered to in order to provide updated T&R manuals to the Total Force as soon as practicable.

505. T&R CONFERENCE MATRIX. The matrix below outlines and summarizes T&R Conference milestones and tasks:

T&R Review Milestones		
Pre-Conference	Unit(s)	By-Date
Coordinate pre-conference Date & Release Convening Msg	Syllabus Sponsor ATD (releases msg.)	NLT 2 months prior to pre-conference date
Conference		
Coordinate conference Date & Release Convening Msg	Syllabus Sponsor ATD (releases msg.)	NLT 3 months prior to conference date
Nominate Voting Reps to ATD via msg/e-mail.	Voting Commands (MARFORS MAWS etc.)	NLT 45 days prior to conference
Submit Agenda Items to Syllabus Sponsor	All Units (As Desired)	NLT 45 days prior to conference
Publish Agenda Items	Syllabus Sponsor ATD (releases msg)	NLT 1 month prior to conference
Post-Conference Requirement		
	Unit(s)	By-Date
Provide Smooth Draft T&R Manual To ATD	Syllabus Sponsor	NLT 1 month after conference completion
Conference Report msg.	Syllabus Sponsor ATD (releases msg.)	NLT 1 month after conference completion
Provide Concurrence with T&R draft to ATD	MARFORS	NLT 1 month after receipt of draft T&R manual.
Forward MARFOR Comments to DC AVN	ATD	ASAP after MARFOR concurrence
Provide Concurrence with T&R draft to ATD	DC AVN	NLT 1 month after receipt of draft T&R manual ATD.
Announce Interim Approval	ATD	ASAP Upon MARFOR & DC AVN Concurrence
Administrative Review	ATD	ASAP Upon MARFOR & DC AVN Concurrence
Obtain CG TECOM Signature & Publish as NAVMC	ATD	ASAP Upon DC AVN Concurrence

506. T&R CORRESPONDENCE CHANGES

1. Units may recommend T&R changes outside of the triennial cycle via a T&R Correspondence change. Units shall submit proposed changes in message format via the respective MAW to the syllabus sponsor. Correspondence must include rationale for the change.

2. The syllabus sponsor shall review and forward the proposed change recommendations to all units in the respective community and CG TECOM ATD within 5 working days of receipt of the correspondence. If the proposed change requires coordination with another community, the originating syllabus sponsor shall also submit it to the appropriate related syllabus sponsor.

3. All units concerned shall submit their comments and recommendations to the syllabus sponsor, via the respective parent command/MAW, within 30 days of the date

of the syllabus sponsor's request for comments. All comments and recommendations shall be submitted via message.

4. The syllabus sponsor shall:

a. Consolidate comments and provide CG TECOM ATD a smooth draft of proposed T&R changes (include update of the T&R event conversion matrix if applicable).

b. Provide CG TECOM ATD supporting message documentation from units providing input.

c. Coordinate with CG TECOM ATD to release a T&R change recommendation message to the MARFORs and CMC (DC AVN) within 45 days of the date of the syllabus sponsor's request for comments. CG TECOM ATD releases the message.

5. CMC (DC AVN) and MARFORs shall review the proposed T&R change and concur or non-concur with justification to CG TECOM ATD within 30 days of the syllabus change recommendation message release. Unresolved issues shall be forwarded to CMC (DC AVN) for decision. Upon MARFOR and CMC concurrence, CG TECOM ATD shall release a message approving the T&R syllabus change for interim use and post it to the CG TECOM ATD website.

6. CG TECOM ATD shall attach CMC and MARFOR comments and forward the change for CG TECOM signature as a NAVMC change. When the NAVMC change is signed, CG TECOM ATD shall release a message announcing the NAVMC has been changed (the NAVMC change replaces the interim T&R syllabus change). CG TECOM ATD shall post the NAVMC change to the CG TECOM ATD website and coordinate with CMC (ARDE) to post the change to the HQMC website.

7. Oversight. ATD will maintain contact with syllabus sponsors to ensure the timeline for the process outlined for T&R manual correspondence changes is closely adhered to in order to provide updated T&R manuals to the Total Force as soon as practicable.

507. T&R CORRESPONDENCE CHANGE MATRIX. The matrix below outlines and summarizes T&R correspondence change milestones and tasks:

T&R Correspondence Change Milestones		
Task	Unit	By Date
Request for T&R Change by msg to syllabus sponsor via MAW	Unit that requests T&R Change	NA
Forward proposed change to all applicable units for review/comment via msg.	Syllabus Sponsor	NLT 5 days after receipt of change request
Submit comments to syllabus sponsor	All units concerned	NLT 30 days after request for comments
Consolidate comments & provide ATD a smooth draft of proposed changes.	Syllabus Sponsor	NLT 45 days after request for comments
Release T&R Change Recommendation msg.	ATD	NLT 45 days after request for comments
Review Proposed Change & Provide Concurrence/Non-Concurrence with justification	MARFOR DC AVN	NLT 30 days after release of change recommendation msg
Announce Interim Approval	ATD	ASAP Upon MARFOR & DC AVN Concurrence
Administrative Review	ATD	ASAP Upon MARFOR & DC AVN Concurrence
Obtain CG TECOM Signature & Publish as NAVMC Change	ATD	ASAP Upon DC AVN Concurrence

508. APPLICABILITY. When a T&R manual update or change is approved for use, the approved version of the manual becomes the training standard for all applicable units. Units shall transition to the approved T&R syllabus as soon as practicable.

509. T&R ADMINISTRATION MESSAGE TEMPLATES. The following types of messages are provided for syllabus sponsor guidance:

Sample	Sample Title
1	T&R Pre-Conference Announcement Message
2	T&R Conference Announcement Message
3	Agenda Item Message
4	Conference Report Message Requesting MARFOR Concurrence
5	Message Requesting DC AVN Concurrence
6	Interim Approval Message
7	Final Signature Message
8	Request for Deviation From T&R Program Manual Policy

1. T&R Pre-Conference Announcement Message Sample

FM CG TECOM QUANTICO VA ATD
TO MARFORS
MAWS
INFO CMC WASHINGTON DC AVN (APP, ETC.)
MEFS
MAWTS
MAG/MACG/MWSG AS REQUIRED
SQUADRONS/UNITS AS REQUIRED
HMX-1 AS REQUIRED
MSGID/GENADMIN/CG TECOM ATD/
SUBJ/PRE-CONFERENCE ANNOUNCEMENT FOR FA-18 AND AV-8 AIRCREW TRAINING AND READINESS (T&R) SYLLABI//
REF/A/NAVMC DIR 3500.14//
REF/B/NAVMC 3500.99//
REF/C/NAVMC 3500.107//
NARR/REF A IS AVIATION T&R PROGRAM MANUAL. REF B IS AV-8B T&R MANUAL. REF C IS FA-18 T&R
MANUAL.//
POC/NAME/RANK/UNIT/DSN: 278-xxxx//EMAIL//
RMKS/1. PER REFS, A T&R PRE-CONFERENCE FOR STANDARDIZATION OF TRAINING SYLLABI FOR FA-18 AND AV-8
AIRCREW WILL TAKE PLACE AT MCAS YUMA, BLD 406 (MAWTS-1), FROM 28-30 JUL 10, 0800 TO 1630 DAILY.
2. THE PURPOSE OF THIS T&R PRE-CONFERENCE IS FOR THE SYLLABUS SPONSOR AND CG TECOM ATD TO
COORDINATE AND BUILD A FOUNDATION AND (TEMPLATE OR DRAFT) IN ADVANCE OF THE FULL T&R CONFERENCE
THAT WILL BE CONDUCTED 1-5 NOV 10.
3. AGENDA WILL BE EXECUTED IAW CHAPTER 5 OF REF A.//

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2. T&R Conference Announcement Message Sample

FM CG TECOM QUANTICO VA ATD
TO MARFORS
MAWS
INFO CMC WASHINGTON DC AVN (APP, ETC.)
MEFS
MAWTS
MAG/MACG/MWSG AS REQUIRED
SQUADRONS/UNITS AS REQUIRED
HMX-1 AS REQUIRED
MSGID/GENADMIN/CG TECOM ATD/
SUBJ/T&R CONFERENCE ANNOUNCEMENT FOR FA-18A/C/D AND AV-8B AIRCRAFT//
REF/A/NAVMC DIR 3500.14//
REF/B/NAVMC 3500.99//
REF/C/NAVMC 3500.107//
NARR/REF A IS AVIATION T&R PROGRAM MANUAL. REF B IS AV-8B T&R MANUAL. REF C IS FA-18 T&R MANUAL.//
POC/NAME/RANK/UNIT/DSN: 278-xxxx//EMAIL//
RMKS/1. PER REFS, A T&R CONFERENCE FOR STANDARDIZATION OF TRAINING SYLLABI FOR FA-18 AND AV-8
AIRCREW WILL TAKE PLACE AT MCAS YUMA, BLD 406 (MAWTS-1), FROM 1-5 NOV 10, 0800 TO 1630 DAILY.
TENTATIVE SCHEDULE LISTED BELOW:
1 NOV: OPENING RMKS, ADMIN INFO, DISC ITEMS, TACAIR STAN ITEMS, AGENDA ITEMS, T&R CONF.
2-4 NOV: T&R CONF CONTINUED.
5 NOV: TACAIR STAN ITEMS, T&R WRAP-UP.
2. SPECIFIC T&R AGENDA TOPICS FROM UNITS OR AGENCIES ARE TO BE SUBMITTED IAW REF A (ITEM,
DISCUSSION, RECOMMENDATION FORMAT) TO (APPROPRIATE SYLLABUS SPONSORS), NLT 15 SEP 10. COMMANDS OR
SUBJECT MATTER EXPERTS DESIRING DISCUSSION BRIEFING TIME ON MUST CONTACT SYLLABUS SPONSORS NLT 1 OCT
10.
3. THE CURRENT VERSION OF REFS B AND C ARE ATTACHED.
4. PER REF A, VOTING MEMBERS CONSIST OF REPS FROM THE FOLLOWING
ORGANIZATIONS:
1. COMMARFORPAC
2. COMMARFORCOM
3. COMMARFORRES
4. CG 1ST MAW
5. CG 2D MAW
6. CG 3D MAW
7. CG 4TH MAW
8. CG MCCDC
REPS SHOULD BE EXPERIENCED IN DAY-TO-DAY SUPERVISION OF AVIATION TRAINING PROGRAMS AND BE ABLE TO
REPRESENT THEIR COMMAND ON EACH ISSUE. FAMILIARITY WITH THE REFS IS CRUCIAL TO THE SUCCESS OF THE
CONF. CG TECOM WILL FUND TWO VOTING REPRESENTATIVES (ONE AV-8 & ONE FA-18) FROM EACH OF THE ABOVE
ORGANIZATIONS. REQUEST MARFORS & MAWS SUBMIT ATTENDEE NOMINATIONS TO CG TECOM NLT 1 OCT 10 VIA MSG
TO CG TECOM ATD.
INFORMATION:
FULL NAME, SSN, MOS, BILLET, COMMAND, EMAIL, DSN PHONE.
5. APPROPRIATION DATA AND T&R AGENDA WILL BE PUBLISHED VIA SEPCOR.
ATTENDEES NOT LISTED IN PARA 4 WILL BE UNIT FUNDED.
6. ATTENDEES ARE RESPONSIBLE FOR TRAVEL AND BILLETING ARRANGEMENTS.
YUMA BOQ DSN: 269-3578.
7. ATTENDEES ARE RESPONSIBLE FOR COORDINATING SECURITY CLEARANCE REQUIREMENTS FOR ENTRY INTO CONF
BUILDING. MAWTS-1 SECURITY CLEARANCE POC: NAME, DSN 269-xxxx; FAX 269-xxxx.
8. UNIFORM IS FLIGHT SUIT OR SERVICE EQUIVALENT.//
BT

3. Agenda Item Message Sample

FM CG TECOM QUANTICO VA ATD
TO MARFORS
MAWS
INFO CMC WASHINGTON DC (APP, ETC.)
MEFS
MAWTS
MAG/MACG/MWSG AS REQUIRED
SQUADRONS/UNITS AS REQUIRED
HMX-1 AS REQUIRED
MSGID/GENADMIN/CG TECOM ATD/
SUBJ/AGENDA ITEMS FOR FA-18 AND AV-8 T&R CONFERENCES.//
REF/A/MSG/NAVMC DIR 3500.14//
REF/B/MSG/NAVMC 3500.99//
REF/C/MSG/NAVMC 3500.107//
NARR/REF A IS AVIATION T&R PROGRAM MANUAL. REF B IS AV-8B T&R MANUAL. REF C IS FA-18 T&R
MANUAL.//
POC/NAME/RANK/UNIT/DSN: 278-xxxx//EMAIL//
RMKS/1. PER REFS, T&R CONFERENCES FOR STANDARDIZATION OF TRAINING SYLLABI FOR FA-18 AND AV-8
AIRCREW WILL TAKE PLACE AT MCAS YUMA, BLD 406 (MAWTS-1), FROM 1-5 NOV 10, 0800 TO 1630 DAILY.
TENTATIVE SCHEDULE LISTED BELOW:
1 NOV: OPENING RMKS, ADMIN INFO, DISC ITEMS, TACAIR STAN ITEMS, AGENDA ITEMS, T&R CONF.
2-4 NOV: T&R CONF CONTINUED.
5 NOV: TACAIR STAN ITEMS, T&R WRAP-UP.
2. PER REF A, CONFERENCE VOTING MEMBERS HAVE BEEN IDENTIFIED AS
FOLLOWS:
FA-18 T&R CONFERENCE:
1. COMMARFORPAC: NAMES
2. COMMARFORCOM:
3. COMMARFORRES:
4. CG 1ST MAW:
5. CG 2D MAW:
6. CG 3D MAW:
7. CG 4TH MAW:
8. CG MCCDC:
AV-8 T&R CONFERENCE:
1. COMMARFORPAC:
2. COMMARFORCOM:
3. COMMARFORRES:
4. CG 1ST MAW:
5. CG 2D MAW:
6. CG 3D MAW:
7. CG 4TH MAW:
8. CG MCCDC:
3. PER REF A, SUBMITTED AGENDA ITEMS HAVE BEEN CONSOLIDATED BY THE FA-18 AND AV-8 SYLLABUS
SPONSOR. CONFERENCE AGENDA ITEMS AND CURRENT VERSION OF REFS B AND C ARE ATTACHED. CONFERENCE
VOTING MEMBERS SHOULD ARRIVE PREPARED WITH COMMAND POSITIONS ON AGENDA ITEMS TO FACILITATE CONDUCT
OF CONFERENCES.
4. APPROPRIATION DATA AND T&R AGENDA WILL BE PUBLISHED VIA SEPCOR. ATTENDEES NOT LISTED IN PARA 2
WILL BE UNIT FUNDED.
5. ATTENDEES ARE RESPONSIBLE FOR TRAVEL AND BILLETING ARRANGEMENTS. YUMA BOQ DSN: 269-3578.
6. ATTENDEES ARE RESPONSIBLE FOR COORDINATING SECURITY CLEARANCE REQUIREMENTS FOR ENTRY INTO CONF
BUILDING. MAWTS-1 SECURITY CLEARANCE POC: NAME, DSN 269-xxxx; FAX 269-xxxx.
7. UNIFORM IS FLIGHT SUIT OR SERVICE EQUIVALENT.//

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4. Conference Report Message Requesting MARFOR Concurrence Sample

FM CG TECOM QUANTICO VA ATD
TO MARFORS
MAWS
INFO CMC WASHINGTON DC AVN (APP, ETC.)
MEFS
MAWTS
MAG/MACG/MWSG AS REQUIRED
SQUADRONS/UNITS AS REQUIRED
HMX-1 AS REQUIRED
MSGID/GENADMIN/CG TECOM ATD/
SUBJ/REQUEST FOR CONCURRENCE - DRAFT FA-18 AND AV-8B T&R MANUALS//
REF/A/MSG/NAVMC DIR 3500.14//
REF/B/MSG/NAVMC 3500.99//
REF/C/MSG/NAVMC 3500.107//
REF/D/MSG/CG TECOM QUANTICO VA/211900Z MAY 10//
NARR/REF A IS AVIATION T&R PROGRAM MANUAL. REF B IS AV-8B T&R MANUAL. REF C IS FA-18 T&R MANUAL.
REF D IS T&R CONF ANNOUNCEMENT MSG.//
POC/NAME/RANK/UNIT/DSN: 278-xxxx//EMAIL//
RMKS/1. PER THE REFS, A T&R CONFERENCE WAS HELD AT MCAS YUMA 1-5
NOV 10 TO UPDATE F/A-18 AND AV-8B AIRCREW TRAINING SYLLABI.
2. CONFERENCE MEMBERS REPRESENTING VOTING COMMANDS WERE AS FOLLOWS:
F/A-18 T&R CONFERENCE:
1. COMMARFORPAC: NAMES
2. COMMARFORCOM:
3. COMMARFORRES:
4. CG 1ST MAW:
5. CG 2D MAW:
6. CG 3D MAW:
7. CG 4TH MAW:
8. CG MCCDC:
AV-8B T&R CONFERENCE:
1. COMMARFORPAC:
2. COMMARFORCOM:
3. COMMARFORRES:
4. CG 1ST MAW:
5. CG 2D MAW:
6. CG 3D MAW:
7. CG 4TH MAW:
8. CG MCCDC:
3. SIGNIFICANT CHANGE PROPOSALS TO F/A-18 AND AV-8B T&R MANUALS INCLUDE: ALIGNMENT OF TACAIR T&R
TRAINING PHILOSOPHY, STANDARDIZATION OF TACAIR NSQ METHODOLOGY, REVISION OF UNIT CORE COMPETENCY
REQUIREMENTS, AND ESTABLISHMENT OF FLIGHT LEADER WORKUP & EVALUATION EVENTS IN 6000 PHASE.
4. THE DRAFT F/A-18 AND AV-8B T&R MANUALS ARE ATTACHED.
5. PER REF A, REQUEST MARFORS CONCUR/NON-CONCUR WITH JUSTIFICATION OF DRAFT FA-18 AND AV-8B T&R
MANUALS VIA MSG TO CG TECOM ATD NLT 13 JAN 11.//

5. Sample Message Requesting DC AVN Concurrence

FM CG TECOM QUANTICO VA ATD
TO CMC WASHINGTON DC AVN APP
INFO MARFORS
MSGID/GENADMIN/CG TECOM ATD//
SUBJ/DRAFT FA-18 T&R MANUAL//
REF/A/DOC/NAVMC 3500.14//
REF/B/MSG/CG TECOM ATD/151939Z FEB 10//
REF/C/MSG/COMMARFORCOM/221845Z FEB 10//
REF/D/MSG/COMMARFORPAC/242052Z FEB 10//
REF/E/MSG/COMMARFORRES/091750Z MAR 10//
NARR/REF A IS AVIATION T&R PROGRAM MANUAL. REF B IS MSG STAFFING DRAFT FA-18 T&R FOR MARFOR CONCURRENCE. REFS C-E PROVIDE MARFOR CONCURRENCE WITH DRAFT FA-18 T&R MANUAL.//
POC/NAME/RANK/UNIT/DSN: 278-xxxx//EMAIL//
RMKS/1. A T&R CONFERENCE FOR THE FA-18 WAS CONDUCTED AT MAWTS-1 22-26 AUG 10.
2. PER REF A, REQ DC AVN APP CONCUR OR NON-CONCUR WITH JUSTIFICATION WITH THE ATTACHED FA-18 T&R DRAFT MANUAL.
3. REQ RESPOND VIA MSG TO CG TECOM ATD NLT 7 NOV 10.//

6. Interim Approval Message Sample

FM CG TECOM QUANTICO VA ATD
TO MARFORS
MAWS
MEFS
MAG/MACG/MWSG AS REQUIRED
SQUADRONS/UNITS AS REQUIRED
MAWTS 1
HMX 1 AS REQUIRED
INFO CMC WASHINGTON DC AVN APP ETC. AS REQUIRED
MSGID/GENADMIN/CG TECOM ATD//
SUBJ/FA-18 T&R INTERIM APPROVAL//
REF/A/DOC/NAVMC DIR 3500.14//
REF/B/MSG/COMMARFORCOM/221845Z FEB 10//
REF/C/MSG/COMMARFORPAC/242052Z FEB 10//
REF/D/MSG/COMMARFORRES/091750Z MAR 10//
REF/E/MSG/CMC WASHINGTON DC APP/121505Z APR 10//
NARR/REF A IS AVIATION T&R PROGRAM MANUAL. REFS B THROUGH E PROVIDE CONCURRENCE WITH DRAFT FA-18 T&R MANUAL.//
POC/NAME/RANK/UNIT/DSN: 278-xxxx//EMAIL//
RMKS/1. PER REFS, INTERIM VERSION OF THE FA-18 T&R MANUAL IS APPROVED FOR USE. THE FA-18 T&R MANUAL WILL BE PUBLISHED AS A NAVMC PUBLICATION.
2. THE MANUAL IS MARKED "INTERIM APPROVED 17 APR 06" AND IS ATTACHED.
3. THE FA-18 CORE COMPETENCY RESOURCE MODEL (CCRM)/FLIGHT HOUR MODEL IS UPDATED TO REFLECT THIS INTERIM APPROVED T&R MANUAL. IT MAY BE ACCESSED AT xxxxxxxxxxxxxxxx
4. REQ MAGS ENSURE DISSEMINATION TO SQUADRONS.//

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7. Final Signature Message Sample

FM CG TECOM ATD(UC)
TO MARFORs
MEFS
MAWS
MAG/MACG/MWSG AS REQUIRED
SQUADRONS/UNITS AS REQUIRED
MAWTS 1
INFO CMC WASHINGTON DC AVN APP ETC. AS REQUIRED
HMX-1 AS REQUIRED
MSGID/GENADMIN/CG TECOM ATD//
SUBJ/FA-18 T&R MANUAL//
REF/A/DOC/NAVMC DIR 3500.14//
POC/NAME/RANK/UNIT/DSN: 278-xxxx//EMAIL//
RMKS/1. PER REF A, FA-18 T&R MANUAL HAS BEEN SIGNED AS NAVMC 3500.107 DATED 25 MAY 10.
2. IT IS ATTACHED AND MAY BE ACCESSED ON THE ATD WEBSITE:
XXXXXXXXXXXX
SELECT "TRAINING & READINESS MANUALS," "FIXED WING TRAINING AND READINESS MANUALS."
3. T&R DOWNLOADS HAVE BEEN UPDATED TO REFLECT THE FOLLOWING CHANGES: AA-263 REPLY INTERVAL CHANGED TO REFLECT A 365 DAY REPLY INTERVAL VICE AN *; NS-253 GOAL CHANGED TO REFLECT LOW ANGLE POP-UP ADDITION, PREREQUISITE CHANGED TO AS-239 VICE AS-237, AND 3 BDU-48'S ADDED TO ORDNANCE REQUIREMENT. THE DOWNLOADS ARE LOCATED ON THE ATD WEBSITE:
XXXXXXXXXXXX
4. THIS NAVMC PUBLICATION IS THE ONLY APPROVED FA-18 T&R MANUAL. ENSURE ALL PREVIOUS VERSIONS/INTERIM VERSIONS ARE REPLACED WITH THE DIRECTIVE LISTED ABOVE.
5. REQUEST MAGS ENSURE DISSEMINATION TO SQUADRONS.// BT

8. Request for Deviation From T&R Program Manual Policy Sample

FM HMM XXX
TO MAG XX

CC:
MAW G-3
MEF G-3
COMMARFOR G-3
CG TECOM ATD
MAWTS-1
MSGID/GENADMIN/(COMMAND)//
SUBJ/T&R DEVIATION REQUEST//
REF/A/DOC/NAVMC 3500.14B//
AMPN/REF A IS AVIATION T&R PROGRAM MANUAL.//
POC/LAST NAME, INITIALS/RANK/COMMAND/PHONE/EMAIL//
RMKS/1. PER REF A, NEWLY DESIGNATED NAVAL AVIATORS, NAVAL FLIGHT OFFICERS, AND CREW CHIEFS SHALL BE ASSIGNED TO AN OPERATIONAL SQUADRON FOR A MINIMUM OF TWO YEARS AFTER COMPLETING CORE SKILL INTRODUCTION PHASE TRAINING.
2. REQUEST APPROVAL TO ASSIGN CAPT NAME, FAC ORDERS WITH LESS THAN TWO YEARS TIME IN AN OPERATIONAL SQUADRON. SNO WILL HAVE BEEN ASSIGNED TO AN OPERATIONAL SQUADRON FOR 22 MONTHS IF APPROVAL IS GRANTED.
3. JUSTIFICATION. CAPT NAME WILL HAVE 22 MONTHS ON STATION PRIOR TO HIS PROPOSED REASSIGNMENT AS A FAC. CAPT NAME VOLUNTEERED FOR A FAC BILLET AND WAS ORIGINALLY SCHEDULED TO TRANSFER AFTER 2 YEARS ON STATION. A SHORT-NOTICED PERSONNEL CHANGE HAS RESULTED IN THE NECESSITY OF HAVING HIM FILL AN EARLIER BILLET REQUIREMENT. CAPT NAME HAS COMPLETED A COMBAT DEPLOYMENT WITH HIS FLEET SQUADRON IN THE SAME THEATER HE WILL BE SUPPORTING AS A FAC.

CHAPTER 6

T&R MANUAL STRUCTURE

SECTION 1: GENERAL BACKGROUND AND REQUIREMENTS FOR CHAPTER 1 OF A T&R MANUAL

	PARAGRAPH	PAGE
PURPOSE.....	600	6-3
T&R STRUCTURE AND CONTENTS.....	601	6-3
T&R UNIT REQUIREMENTS.....	602	6-4
INDIVIDUAL T&R REQUIREMENTS (SECTION 2).....	603	6-21

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CHAPTER 6

SECTION 1

T&R MANUAL STRUCTURE

GENERAL BACKGROUND AND REQUIREMENTS FOR CHAPTER 1 OF A T&R MANUAL

600. PURPOSE

1. The purpose of this Chapter is to provide guidance on the development and revision of community aviation T&R manuals. This Chapter provides standardization policy for the structure, organization, and content of community T&R manuals. Community T&Rs shall adhere to the policy, content, sequence, and format requirements delineated in this Manual when developing or updating community aviation T&R Manuals.

2. The development or revision of a T&R manual is a time-intensive and complex process that community SMEs must understand. Factors to consider when determining T&R requirements include unit and individual syllabi, event complexity, conditions, R-coding, chaining, refly, amongst others. The routine T&R conference procedures are to first review and/or revise unit training requirements, then do the same with individual training requirements. Specifically, SMEs should conduct a rough revision of unit CMMR information and individual T&R requirements summarized in matrices throughout each individual T&R chapter. After rough revisions are completed, T&R matrices should be compared to unit CMMR and individual Maintain CSP and MSP tables so that T&R adjustments can be made as needed. From there, SMEs should continue with revising remaining T&R required information. As a last step, ensure unit CMMR and individual T&R requirements (include the Maintain CSP and MSP tables) are accurate.

3. T&R syllabi within a community may be interrelated/dependent (particularly for crewed platforms/systems). Therefore, individual T&R syllabi should always be developed in concert.

601. T&R STRUCTURE AND CONTENTS

1. Aviation T&R manuals shall consist of at least two chapters. The first chapter of every T&R manual delineates unit T&R information. The second and subsequent chapters delineate individual T&R requirements for each applicable MOS/crew position within the community. The number of chapters depends on the number of MOSs/crew positions. For example, a CH-46 T&R manual has three MOS/crew positions and therefore will have four chapters in noted order: (1) CH-46 Training and Readiness Unit Requirements; (2) Pilot; (3) Crew Chief; and (4) Aerial Observer.

2. This Chapter consists of 4 sections as follows:

a. Section 1 provides general background and instructions for the content of a T&R Manual Chapter 1, Unit Requirements.

b. Section 2 provides a template for a T&R Manual Chapter 1, Unit Requirements.

c. Section 3 provides instructions for the content of a T&R Manual Chapter 2 (and any additional chapters based on the number of crew positions/MOS's) for Individual Requirements.

d. Section 4 provides a template for a T&R Manual Chapter 2 (and subsequent), Individual Requirements.

602. T&R UNIT REQUIREMENTS

1. This section delineates Chapter 1 training and readiness unit requirements that include T&R format and Core Model requirements. Subparagraphs in Chapter 1 include applicable Unit Mission, Core METL, T/O information, Core METL Output Standards, Core METL to Core/Mission/Core Plus Skills Matrices, and Core Model Minimum Requirements (CMMR), and supporting matrices.

2. Chapter 1 shall contain the information in the order listed below:

Chapter 1 Required Paragraphs	
1.0	(Community) TRAINING AND READINESS UNIT REQUIREMENTS
1.1	MISSION
1.2	TABLE OF ORGANIZATION
1.3	SIX FUNCTIONS OF MARINE AVIATION
1.4	ABBREVIATIONS
1.5	MISSION ESSENTIAL TASK LIST (METL)
1.6	MISSION ESSENTIAL TASK (MET) TO SIX FUNCTIONS OF MARINE AVIATION
1.7	MISSION ESSENTIAL TASKS (MET) OUTPUT STANDARDS
1.8	MET TO CORE/MISSION/CORE PLUS SKILL MATRIX
1.9	CORE MODEL MINIMUM REQUIREMENT (CMMR) SKILLS PROFICIENCY REQUIREMENTS
1.10	READINESS REPORTING
1.11	INSTRUCTOR DESIGNATIONS (5000 PHASE)
1.12	REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, AND DESIGNATIONS (R, C, Q & D) (6000 PHASE)
1.13	UNIT EXTERNAL RESOURCE REQUIREMENTS

NOTE

At a minimum, each individual T&R chapter shall include above paragraphs in the order listed. It is understood that some communities may need to expound on information; therefore as long as the paragraphs appear in proper sequence, other paragraphs may be inserted. Just ensure all paragraphs are numbered sequentially.

3. CMMR Applicability. Tactical aviation community T&Rs shall delineate CMMR. Operational Support Airlift community T&Rs may be required to delineate CMMR depending on mission requirements, but shall adhere to the remainder of unit T&R structure requirements.

4. Mission Statement. A clear and succinct description of the unit's purpose for existence that contains required capabilities the unit is expected to provide the gaining force commander during combat or contingency operations. Refer to the applicable T/O that contains the official unit mission statement. Aviation ground communities may define the capability of each subunit in subparagraphs below the mission statement.

5. Table of Organization (T/O) Information

a. Unit T/O information shall be derived from the current T/O managed by Total Force Structure, MCCDC. Community T&Rs shall list authorized billet structure by MOS and organizational structure.

b. T/M/S Communities. Include number of aircraft and T/O; include FRS structure. If applicable, standardized detachments shall also be listed.

c. Aviation Ground Communities. Include total personnel for each unit and subunit per the T/O table.

6. Six Functions of Marine Aviation. The purpose of including a recap of the six functions of Marine Aviation in T&R manuals is to link the unit mission statement and associated Mission Essential Tasks (MET) to Marine Corps doctrine (MCWP-3-2).

7. Abbreviations. Community T&Rs shall contain standard abbreviations as set forth in each manual. Abbreviations shall be listed alphabetically. Further, they are subdivided by training phases.

8. Mission Essential Task List (METL). A standardized approved list of specified tasks a unit is designed or organized to perform. Selected tasks are drawn from the Marine Corps Task List (MCTL) and are standardized by type unit. Information for this table is drawn from the data derived during the pre-conference MET working group that develops the MET worksheet. The MET worksheet lists METS and delineates conditions and output standards for each.

9. MET to Six Functions of Marine Aviation. This table depicts the relationship between the community-specific METS to the six functions of Marine Aviation.

10. MET Output Standards. This table lists the Core METL Output Standards as follows:

a. Core METL Output Standards. The required level of performance a unit must be capable of sustaining during contingency/combat operations by MET to be considered MET-ready.

b. The Unit Core METL and Output Standards are approved by CG MCCDC in accordance with MARADMIN 390/07 (DRRS Implementation Responsibilities for Marine Corps Organizations, Units, and Installations). They may be accessed at the TECOM/ATD website at

<https://www.intranet.tecom.usmc.mil/hq/branches/atbl/default.aspx>

c. Aviation Ground Output Standards are measured as collective output, vice number of sorties, as defined in the MET worksheet.

11. MET To Core/Mission/Core Plus Skill Matrix. Provides a relational connection between the Core MCT (Marine Corps Task) and each Core/Mission/Core Plus skill required to perform the MCT. All skills must be represented.

12. Core Model Minimum Requirement (CMMR) Skills Proficiency Requirements By Crew Positions. This table provides the crew composition requirements and objectively defines the number of crews required to execute the output standards.

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a. The Unit CMMR is determined by community T&R conference SMEs and consists of the Crew Definition/Core and Mission Skill Proficiency, Crew Definition/Core Plus Skill Proficiency, Combat Leadership, and Instructor Requirements tables.

b. The Core Model Training Report (CMTR) will display Core and Mission Skill Proficiency numbers in terms of individuals and crews by comparing actual numbers of proficient crews (via M-SHARP logged data) to CMMR tables to provide a readiness picture to the unit. The CMTR will not display Core Plus Skill Proficiency.

13. Readiness Reporting. This paragraph delineates minimum aircrew/aviation ground crew qualifications and designations required to contribute to unit readiness. Chapter 7 provides additional guidance and a detailed description of readiness reporting using the Defense Readiness Reporting System - Marine Corps (DRRS-MC) and the Current Readiness Program.

14. Instructor Designations (5000 Phase). This table provides the instructor requirements and objectively defines the desired number of instructors by crew position required to train crews. The CMMR for instructors is defined in terms of the minimum requirement to replenish the cadre of Core/Mission/Core Plus Skill Proficient crews and Combat Leaders every year. Individuals count towards this requirement upon designation in writing by the commanding officer. Commanding and executive officers do not count in this total.

15. Requirements, Certifications, Qualifications, and Designations (6000 Phase). This table provides the crew composition requirements for certifications, qualifications, designations (includes combat leadership and instructors).

a. Combat Leaders

(1) Each unit shall maintain Combat Leaders capable of providing the commander the leadership skills and qualities required to project combat power.

(2) Combat leaders are essential to success in the battlefield. Combat leaders direct the actions of their forces to support, influence, and synchronize their forces with the elements of combat power to impose our will on the situation and defeat the enemy. Additionally, they direct the execution of plans at their level.

b. The CMMR for Combat Leadership is defined in terms of minimum numbers of tactical leaders required to execute the unit METL and is delineated in the respective model/series specific T&R Manual.

c. The combat leadership metric (CMMR) is applicable to the entire unit readiness assessment and is not tied specifically to individual METs. Individuals count towards this requirement upon designation in writing by the commanding officer.

16. External Resources. This section addresses any external critical training resources required to achieve T&R requirements (e.g., ranges, adversary support, tanker support, etc.). Objectively defining and identifying aviation training resource requirements will assist operational and HQ agencies in defining required aviation training resources. Communities may tailor the format of this section to meet their requirements. Training resources for MACG units may entail simulation support, aviation live fly requirements for position training and combined arms exercises.

17. Refer to Section 2 of Chapter 6 for a sample Aviation T&R manual Chapter 1 template.

CHAPTER 6

SECTION 2

SAMPLE T&R MANUAL CHAPTER 1 UNIT READINESS REQUIREMENTS TEMPLATE
FOR AN AVIATION T&R MANUAL

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