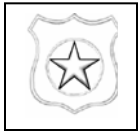


**MA CAREER PATH
(SW/AW/EXW)**



Master at Arms (MA). MAs will individually, or as part of a force, be able to conduct Force Protection operations in order to defeat threats at sea, on shore, and in expeditionary environments. Force Protection is a program that comprises of three pillars: Antiterrorism, Physical Security and Law Enforcement. Specifically, the MA will conduct scalable force protection and security providing layered defense for designated assets and critical infrastructure throughout the world. Additionally, MAs will operate in an integrated at sea/coastal/landward security environment, providing mobile and fixed defensive operations in support of Commanders performing base defense, expeditionary/combat operations, strategic asset security, law enforcement, corrections, and special events and operations with other services, host nation partners, and civil authorities.

YEARS OF SERVICE	CAREER MILESTONES	AVERAGE TIME TO ADVANCE	COMMISSIONING / OTHER SPECIAL PROGRAMS	SEA/SHORE FLOW	TYPICAL CAREER PATH DEVELOPMENT
27-30	MACM	21.7 Yrs		36	5 th Shore Tour CONUS Billet: SEA/LCPO/Assessor Duty: CNIC Installations /Staff/STAAT/Detailer/NSF Sponsor/ECM. Qualification: MTS
24-27	MACM MACS	21.7 Yrs 18.8		36	4 th Shore Tour Billet: NSF Sponsor/ECM/Detailer/MWD Program Manager/Assessor/SEA/LCPO /HPU Patrol Leader. Duty: CNIC Installations/Staff/NCIS STAAT/NECC/ VQ/ATG. Qualification: SCI/MTS/NSF Master Specialist
21-24	MACM MACS MAC MA1	21.7 Yrs 18.8 9.8	CSEL	36	4 th Sea Tour INUS/OCONUS Billet: Dept/Div LCPO/ CMAA/LPO/ATTWO/HPU TRASUP/HPU Patrol Leader / MWD Program Manager/ Fleet Kennel Master. Duty: Ship or Deploying Unit/ CNIC Installations/Staff/CVN/ LHA/LHD/CG/ DDG/ CORIVRON/SWF. Qualification: ESWS/EAWS/ EXW/NWS/SCI/NSF Master Specialist
18-21	MACM MACS MAC MA1	21.7 Yrs 18.8 14.9 9.8	CSEL	36	3 rd Shore Tour Billet: SEA/LCPO/OPS LCPO/LPO/ATO/Instructor/ Detailer/Assessor/Fleet or Regional Kennel Master/ WCDR/AT TRASUP/ HPU TRASUP/ HPU Patrol Leader. Duty: CNIC Installations/ Staff/CENSECFOR/STAAT/ CORIVGRU/VQ/ATG. Qualification: MTS/SCI/NSF Master Specialist



**MA CAREER PATH
(SW/AW/EXW)**



YEARS OF SERVICE	CAREER MILESTONES	AVERAGE TIME TO ADVANCE	COMMISSIONING/ OTHER SPECIAL PROGRAMS	SEA/SHORE FLOW	TYPICAL CAREER PATH DEVELOPMENT
17-18	MACS MAC MA1	18.8 Yrs 14.9 9.8	CSEL	Dependent Restricted Tour (DRT)	2nd DRT Billet: SEA/LCPO/LPO/ MWD Kennel Master/AT TRASUP/HPU TRASUP/ HPU Patrol Leader. Duty: CNIC Installations Qualification: SCI(HPU)/ NSF Master Specialist
14-17	MACS MAC MA1	18.8 Yrs 14.9 9.8	CSEL	36	3 rd Sea Tour Billet: Dept/Div LCPO/ CMAA/LPO/ATTWO/Fleet or Regional Kennel Master/AT TRASUP/ CRF Patrol Leader/Kennel Master. Duty: Ship or Deploying Unit/ CNIC Installations/Staff/CVN/ LHA/LHD/CG/ DDG/ CORIVRON/SWF/ SPECWAR. Qualification: ESWs/EAWS/ EXW/NWS/SCI/NSF Master Specialist
11-14	MACS MAC MA1 MA2	18.8 Yrs 14.9 9.8	LDO, OCS, MECP, CSEL, Brig	36	2 nd Shore Tour Billet: SEA/Dept/Div/Ops/ LCPO/LPO/ATO/Instructor/ Detailer/Regional Kennel Master/ Regional MWD Trainer /Kennel Master/ CNIC/STAAT Assessor/ WCDR/AT TRASUP/HSB TRASUP/HPU Patrol Leader. Duty: CNIC Installations/ Staff/NCIS/CORIVGRU/VQ/ ATG/CENSECFOR Qualification: MTS/SCI/NSF Master Specialist
8-11	MAC MA1 MA2	14.9 Yrs 9.8 4.4	LDO, OCS, MECP, Brig	36	2 nd Sea Tour CONUS or OCONUS Billet: Dept/Div LCPO/Ops LCPO/LPO/WCDR/ Investigator/Kennel Master/ MWD Handler/AT TRASUP/HSB TRASUP/CRF Patrol Leader/SAMI/CSWI. Duty: Ship or Sea Going Unit/ CNIC Installation Staff/CVN/LHA/LHD/CG/ DDG/CORIVRON/SWF/ SPECWAR Qualification: ESWs/EAWS/ EXW/NWS/NSF Senior Specialist



MA CAREER PATH
(SW/AW/EXW)



YEARS OF SERVICE	CAREER MILESTONES	AVERAGE TIME TO ADVANCE	COMMISSIONING/ OTHER SPECIAL PROGRAMS	SEA/SHORE FLOW	TYPICAL CAREER PATH DEVELOPMENT
5-8	MA2 MA3	4.4 Yrs 2.1	STA-21, OCS, MECP, Brig	36	1 st Shore Tour Billet: Patrolman/Patrol SUP/SAMI/CSWI/MWD Handler/HPU LV II, FTO, Coxswain/Instructor. Duty: CNIC Installations/VQ/CENSECFOR. Qualification: MTS/SCI/NSF Specialist
4-5	MA3 MASN	2.1 Yrs	STA-21, OCS, MECP	Dependent Restricted Tour (DRT)	1 st DRT Billet: Patrolman/Sentry/HPU Crewmember/ HPU Coxswain/MWD Handler. Duty: CNIC Installations Qualification: SCI/NSF Specialist
1-4	MA3 MASN	2.1 Yrs		36	1 st Sea Tour CONUS/OCONUS Billet: Patrolman/Sentry/MWD Handler/Coxswain/HPU or CRF Crewman. Duty: Ship or Sea going Unit/CNIC Installations/CVN/LHA /LHD/CORIVRON/SWF/VQ. Qualification: ESWS/EAWS EXW/NWS/SCI/NSF Specialist
1 +/-	MASN MASA MASR Accession Training	9 Months			Recruit Training and all schools or training events required to be completed prior to reporting to their first operational command

Notes:

1. "A" school is required
2. All Master-At-Arms (MA) must focus on primary duties and qualify to rank and respective TYCOM requirements as quickly as possible. Equally important is maintaining security clearance eligibility, weapons proficiency and worldwide assignability to meet rating needs.
3. MA's do not have a typical Sea-Shore Flow model, rather the rating operates as a CONUS/OCONUS (or INUS/OUTUS) rotation with OCONUS or OUTUS tours counting as sea tours for rotational purposes. Shore billets account for approximately 70% of MA funded billets. With this in mind, all attempts should be made by the individual to take a sea or deploying billet whenever possible. There is also a requirement for two isolated duty (without family members) tours during career. Maintaining a diverse history of assignments throughout the Navy Security Force specialties enhances chances for advancement.
 - a. MA Billet Selection. Top enlisted MA personnel will be relied upon as advisors to Commanding Officers and Flag Officers. As such, it is imperative our top enlisted personnel have experience in the majority of our Security Force Specialties:



MA CAREER PATH (SW/AW/EXW)



(1) SWFPAC, SWFLANT, TACAMO (VQ Det) assignments. These assignments should be considered career enhancing due to the unique qualifications required and are considered arduous duty. These tours are counted as a Sea Tour for rotational purposes.

(2) Dependent Restricted Tours (DRT) in Souda Bay Crete, Diego Garcia, Bahrain, El Salvador, Bahamas, Deveselu Romania, and Redzikow, Poland. MAs should expect two dependent restricted tours in their career. These assignments should be career enhancing and are considered arduous duty. These tours are counted as a Sea Tour for rotational purposes.

(3) Independent Duty Ship tours. (Ensure active involvement with the FCPOA/CPO Mess as appropriate to paygrade and holding a major collateral duty in order to be competitive amongst peers and at the selection boards).

(4) Type 4 forward deployed forces (overseas sea duty)

b. Duty Types. Types of duty offer the potential to attain NEC's and warfare designations. MA's should take advantage of these opportunities to stay competitive for advancement:

(1) Installation Security. MAs provide Force Protection support for the Installation Commanding Officer with the mission of protecting the installation, it's assets, and it's personnel. MAs assigned to installations currently do not have the opportunity to obtain a warfare qualification. NECs 717B, 718B, P01A, P02A, P05A, P06A and 804A are associated with installation security tours.

(2) Harbor Patrol Unit (HPU). MAs assigned to the HPU operate small craft providing point and area security for waterside assets and ports. Additionally, HPUs may conduct High Value Unit (HVU) escorts. MAs assigned to HPUs currently do not have the opportunity to obtain a warfare qualification. Although not inclusive in all units, MAs assigned to an HPU may be eligible to qualify for the Small Craft Insignia. NEC 853A, P03A, P04A are associated with HPU tours.

(3) Expeditionary Forces. MAs assigned to the Expeditionary Forces will be assigned to the Coastal Riverine Force (CRF). The CRF encompasses both the Maritime Expeditionary Security Force (MESF) and Riverine mission sets. A tour in CRF is a Sea Tour. MAs assigned to the CRF may be performing duties in boat operations, Aircraft Security Team (AST), Embarked Security Team (EST), Joint Terminal Air Controller (JTAC), Visit, Board, HVU escorts, Search and Seizure (VBSS), Expeditionary Designated Marksman (EDM), Expeditionary Small Arms Marksmanship Instructor (ESAMI), and Intelligence, Surveillance and Reconnaissance (ISR) operations. All MAs assigned to Expeditionary Units are required to qualify as Expeditionary Warfare Specialist (EXWS) within 12 months of assignment. NECs 717B, 718B, 804A, 804G, 804A and 0190 are associated with Expeditionary tours.

(4) Strategic Systems Programs (SSP). MAs assigned to this type of duty conduct security operations for strategic assets at either Strategic Weapons Facility (SWF) Atlantic or Pacific. MAs assigned to a SWF are regulated by the Personnel Reliability Program (PRP) and attached to a Marine Corps Security Force Battalion. MAs assigned to this duty type conduct security operations, HPU, or Military Working Dog (MWD) duties. MAs assigned to SWF do not have the opportunity to obtain a warfare qualification. MAs assigned to SWF are authorized to wear Enlisted Nuclear Weapons Security (NWS) Breast Insignia after qualification in the highest watch station commensurate with their paygrade and maintaining PRP certification for 12 months. A star is earned for each consecutive 12 months of maintaining qualifications thereafter. NECs 717B, 718B, P05A, P06A, 804A, 853A, P10A are associated with SSP tours.

(5) TACAMO (VQ3/VQ4/SCW-1). MAs assigned to this type of duty conduct security operations for strategic aircraft. MAs assigned to TACMO are regulated by the PRP. VQ3 with UIC 55154 and VQ4 with UIC 42065 are considered sea duty for MAs. Other VQ detachments are considered shore duty. SCW-1 with UIC 55575 is considered shore duty, but remains regulated by PRP. MAs assigned to VQ may have the opportunity to qualify Enlisted Aviation Warfare Specialist (EAWS).



MA CAREER PATH (SW/AW/EXW)



(6) Afloat Security. MAs in this duty type conduct in port and underway Force Protection operations onboard LHA, LHD and CVNs. MAs may be used for Antiterrorism operations, Physical Security, Law Enforcement, investigations, brig operations and training for the Ship's Self Defense Force. All MAs assigned to this duty type have the opportunity to qualify as Enlisted Surface Warfare Specialist (ESWS). All Sailors must qualify ESWS within a predetermined timeframe established by the member's command. MAs assigned to this type of duty may also have the opportunity to qualify as EAWS. NECs P01A, P02A, P08A, P12A, and 804A are associated with afloat security tours.

(7) Chief Master-at-Arms (CMAA). MACSs are normally assigned to LPDs, MACs are normally assigned to CGs, and MA1s are normally assigned to DDG's. These MAs manage the Force Protection program, train and qualify the Ship's Self-Defense Force, conduct investigations, perform legal officer functions, and assist the Commanding Officer in maintaining good order and discipline. All MAs assigned to this duty type must qualify ESWS within a predetermined timeframe established by the member's command. NECs P01A, P02A, and 804A are associated with Afloat Independent Duty CMAA tours.

(8) Military Working Dog (MWD). MWDs are assigned to Installation Security, Strategic Weapons Facilities (SWF). NEC P05A, MWD Handler, and/ or NEC P06A, Kennel Master/Trainer, is required for MWD tours. NEC P05A, and a minimum of four (4) years of MWD handler experience, is a prerequisite for NEC P06A. NEC P05A and NEC P06A may also be assigned to Naval Special Warfare units. NEC P06A is generally reserved for qualified MA1s and above. Qualified MA2s may obtain NEC P06A; however, will not fill a KM billet until they are advanced to MA1. The MWD Program Manager approves P05A/P06A recommendations. Normally, MA1s will be assigned as Kennel Masters to installations with less than eight (8) MWDs or as MWD Trainer at larger kennels or Regional MWD staff. MACs and above are assigned as Kennel Masters, MWD Trainers, NCIS STAAT Assessors, CNIC CART Assessors, and Regional or Fleet Kennel Masters. An MACM will normally fill the MWD Program Manager assignment. MWD Teams routinely deploy in support of overseas contingency operations, Presidential/Head of State missions and other VIP/ special event missions. Duty type for MWD Handlers is commensurate with the unit to which they are assigned. Duty rotation operates as a CONUS-OCONUS (or INUS/OUTUS) rotation, with a majority of the billets being CONUS. Duty rotation for NEC P06A may include back-to-back CONUS tours. Since this is a closed loop program, MWD Handlers do not have the opportunity for a warfare qualification. MAs may be assigned as MWD Handler, MWD Trainer, Kennel Master or perform MWD Instructor duties.

(9) Protective Service Detail (PSD). MAs within a PSD are assigned to the Naval Criminal Investigative Service (NCIS). MAs conducting PSD missions provide protection for designated High Risk Personnel (HRP). These duties include site surveys, planning, and pedestrian/vehicle security. MAs assigned to PSD missions do not have the opportunity for a warfare qualification. NEC P09A is required for PSD tours.

c. Other Tours. In addition to the main duty types, MAs conduct duties that support the NSF, the Fleet and other commands. These tours are diverse in nature and are considered SHORE DUTY.

(1) Instructor Duty. MAs are assigned to CENSECFOR and other training centers as instructors. This duty is considered vital to the sustained health of the Naval Security Force (NSF). MAs assigned to Instructor Duty have the opportunity to qualify as a Master Training Specialist.

(2) Staff Duty. MAs are assigned to various TYCOM, FLEET, COCOM and other staffs. These MAs primarily conduct antiterrorism (AT) planning and assessments of subordinate units.

(3) Training and Assessment Teams.

(a) Security Training and Assessment Teams (STAAT) is a subordinate unit within the Office of Military Support (OMS) for the Naval Criminal Investigative Service (NCIS). MAs assigned to STAAT conduct port, physical security, installation, hotel, courtroom, liberty venue, humanitarian assistance site, and airfield vulnerability assessments. They also provide Military Sea Lift Command (MSC) Individual Ship Assessments, Commander Naval Installations Command Mobile Training Teams (CNIC-MTT), Military Working Dog Program assessments, TACAMO assessments, Inter-Operability Program Training and provides Mobile



MA CAREER PATH (SW/AW/EXW)



Training Teams for NSF related training. Personnel assigned to STAAT do not have the opportunity for a warfare qualification. MAs assigned to STAAT may be eligible for Master Training Specialist (MTS) and are required to hold the 804A and 853A NEC.

(b) Afloat Training Group (ATG) is a subordinate unit of SURFLANT and SURFPAC. MAs assigned to ATG conduct inspections and certifications of surface vessels. Command Assessment for Readiness and Training (CART)/ Final Evaluation Problem (FEP) Teams.

(c) Command Assessment of Readiness and Training / Final Evaluation Problem (CART/ FEP) is an administrative program assessment, led by Commander, Naval Installations Command (CNIC) headquarters. MAs assigned to CART/ FEP conduct installation security assessments to ensure the installations adherence to all Naval Security Force (NSF) operational requirements. Personnel assigned to CART/ FEP do not have the opportunity for a warfare qualification.

(4) Independent Duty Master At Arms (IDMAA). MACSs and MACs may be assigned as IDMAA to Transient Personnel Units, Nuclear School house billets, NAVIDFOR facilities or imbedded in certain deployable units such a Special Warfare or Seabee Battalions. In these billets, the IDMAA will have a variety of roles similar to the CMAA on CGs and DDGs. NECs P02A, 804A, and 90CS are associated with IDMAA tours.

4. Certifications available to MAs:

- Master Training Specialist
- Military Customs Inspector
- Air Force Phoenix Raven Course
- VBSS
- ATO Level II
- SPeD (Security Professional Education Development program is the Department of Defense initiative to professionalize the security workforce)
- POST (Peace Officer Standardized Training).

5. Rating NEC's:

717B: Small Arms Instructor
718B: Crew Served Weapons Instructor
P01A: Chief Master-at-Arms
P02A: Command Investigator
P03A: Harbor Security Patrol Supervisor
P04A4: Harbor Security Boat Training Supervisor
P05A: Military Working Dog Handler
P06A: Military Working Dog Kennel Master
P08A: Corrections Specialist (Brig Afloat)
P09A: Protective Service Specialist
P10A: Nuclear Weapons Security Specialist (NWSS)
804A: Anti-terrorism Training Supervisor
804G: Expeditionary Force Combat Skills
805A: Instructor
853A: Force Protection Boat Coxswain
P11A: Physical Security Specialist
P12A: Military Criminal Investigator

6. Acronyms:

ACFL (Assistant Command Fitness Leader)
AT (Antiterrorism)
ATG (Afloat Training Group)
ATS (Afloat Training Specialist)



MA CAREER PATH
(SW/AW/EXW)



BJOY (Blue Jacket of the Year)
CAT (Command Assessment Team)
CENSECFOR (Center for Security Forces)
CART (Command Assessment of Readiness and Training)
CFL (Command Fitness Leader)
CMAA (Chief Master at Arms)
CMEO (Command Managed Equal Opportunity)
CNIC (Commander, Naval Installations Command)
CNO IVA (Chief of Naval Operations Integrated Vulnerability Assessments)
CONUS (Continental United States)
CORIVGRU (Commander Riverine Group)
CRF (Coastal Riverine Force)
CSEL (Command Senior Enlisted Leader)
CTT (Command Training Team)
DAPA (Drug and Alcohol Program Advisor)
EAWS (Enlisted Aviation Warfare Specialist)
ECM (Enlisted Community Manager)
EDM (Expeditionary Designated Marksman)
ESAMI (Expeditionary Small Arms Marksmanship Instructor)
EST (Embarked Security)
ESWS (Enlisted Surface Warfare Specialist)
EXW (Expeditionary Warfare)
DCTT (Damage Control Training Team)
FCPOA (First Class Petty Officer Association)
FEP (Final Exercise Problem)
HPU (Harbor Patrol Unit)
HPU SUP (Harbor Patrol Unit Supervisor)
HPU TRASUP (Harbor Patrol Unit Training Supervisor)
HRP (High Risk Personnel)
HVU (High Value Unit)
IDMAA (Independent Duty Master At Arms)
INUS (In United States)
ISR (Intelligence, Surveillance and Reconnaissance)
JTAC (Joint Terminal Air Controller)
JSOY (Junior Sailor of the Year)
LCPO (Leading Chief Petty Officer)
MA (Master at Arms)
MESF (Maritime Expeditionary Security Force)
MTS (Master Training Specialist)
MWD (Military Working Dog)
NCIS (Naval Criminal Investigative Service)
NEC (Navy Enlisted Classification)
NECC (Navy Expeditionary Combat Command)
NSF (Naval Security Force)
NWS (Nuclear Weapons Security)
OCONUS (Outside Continental United States)
OUTUS (Outside United States)
PME (Primary Military Education)
PRP (Personnel Reliability Program)
PSD (Protective Services Detail)
SEA (Senior Enlisted Advisor)
SEJPME (Senior Enlisted Joint Primary Military Education)
SCI (Small Craft Insignia)
SOY (Sailor of the Year)
SPECWAR (Special Warfare)



MA CAREER PATH (SW/AW/EXW)



SPeD (Security Professional Education Development)
STAAT (Security Training and Assessment Teams)
SWF (Strategic Weapon Facility)
SWFLANT (Strategic Weapon Facility – Atlantic)
SWFPAC (Strategic Weapon Facility – Pacific)
TACAMO (Take Charge and Move Out)
TACSUP (Tactical Supervisor)
TYCOM (Type Commander)
USMAP (United Services Military Apprenticeship Program)
VBSS (Visit, Board, Search, and Seizure)
WC (Watch Commander)

Considerations for advancement from E6 to E7

- Qualified to pay grade requirements / TYCOM Specific (CNIC – WC; NECC – TACSUP/Mission Commander, etc.); qualifications outside of normal Watch Station (i.e. Repair Locker Leader).
- Excelling in primary duties. Sailors excelling under their lead (SOY/JSOY/BJOYs).
- Success in a high profile position for pay grade, i.e. LPO, Watch Commander, Mission Commander, Area Supervisor, AT planner, Trainer, etc.
- Earned a warfare pin, if assigned to a warfare platform, i.e. NECC = EXW, USS = SW, Squadron = AW, MTS/ATS if at Training Command, etc.
- Continued professional development, i.e. attending military schools, college courses, completing correspondence courses, (PME/SEJPME). Sailors earning their qualifications and academic achievements (USMAPS/Degrees, etc.), If degree is completed, continuing to work toward next degree, etc.
- Active FCPOA involvement, documented mentoring of Sailors.
- Sailor 360 involvement and leading a committee
- Command level involvement, i.e. training team (ATTT, DCTT, etc.), collateral duty (ACFL, CAT, CTT, etc.) and results documented

Considerations for advancement from E7 to E8

- Qualified to pay grade requirements / TYCOM specific; CDO
- Excelling in primary duties. Achieve mastery level, Sailors excelling under their lead (SOY/JSOY/BJOYs, advancements, qualifications, education, self-improvement etc.), documented success in CART/FEP/ULTRAs ect.
- Success in a high profile position for pay grade, i.e. Assistant Security Officer, Serving as CMDCM/CMDCS in incumbent's absence, LCPO, AT planner, Trainer, etc.
- Earned a warfare pin, if assigned to a warfare platform, i.e. NECC = EXW, USS = SW, Squadron = AW, MTS/ATS if at Training Command, etc.
- Continued professional development, i.e. attending military schools, college courses, completing correspondence courses, Senior Enlisted Academy (Any Service). If degree is completed, continuing to work toward next degree, etc.
- Active CPOA involvement, documented mentoring of Sailors.
- Sailor 360 involvement and leading a committee
- CPO Initiation involvement, Committee Chair/Co-Chair.
- Command level involvement, i.e. training team (ATTT, DCTT, etc.), collateral duty (CFL, DAPA, CMEO) and results documented

Considerations for advancement from E8 to E9

- Qualified to pay grade requirements / TYCOM specific, CDO/SDO.
- Excelling in primary duties. Achieve mastery level. Leading, mentoring, and training Chiefs, documented success. Sailors excelling under their lead (SOY/JSOY/BJOYs, advancements, qualifications, education, self-improvement etc.), documented success in CART/FEP/ULTRAs ect.



MA CAREER PATH
(SW/AW/EXW)



- Success in a high profile position for pay grade, i.e. Assistant Security Officer, Serving as CMDCM/CMDCS in incumbent's absence, LCPO, SEA, SEL AT planner, Trainer, Command Level Facilitator etc.
- Earned a warfare pin, if assigned to a warfare platform, i.e. NECC = EXW, USS = SW, Squadron = AW, MTS/ATS if at Training Command, etc.
- Continued professional development, i.e. attending military schools Senior Enlisted Academy (SEA), college courses, completing correspondence courses, (Any Service). If degree is completed, continuing to work towards next degree, PPME/SEJPME, etc.
- Sailor 360 involvement and leading a committee.
- Active CPOA/CPO Mess involvement.
- CPO Initiation involvement, Executive Chair, Committee Chair/Co-Chair.
- Command level involvement, i.e. training team (ATTT, DCTT, etc.), collateral duty (CFL, DAPA, CMEO), and results documented.