Fire Support and Field Artillery Certification and Qualification

MARCH 2020

Distribution Restriction: Approved for public release; distribution is unlimited. *This publication supersedes TC 3-09.8, dated 1 February 2019.

Headquarters, Department of the Army

This publication is available at the Army Publishing Directorate site (http://armypubs.army.mil), and the Central Army Registry site (https://atiam.train.army.mil/catalog/dashboard).

Headquarters Department of the Army Washington, DC, 30 March 2020

Fire Support and Field Artillery Certification and Qualification

Contents

		Page
	PREFACE	iii
Chapter 1	INTRODUCTION	1-1
	SECTION I – THEORY OF THE FIELD ARTILLERY HOME STATION STRATEGY Field Artillery Home station Training Strategy	1-1
	SECTION II – CERTIFICATION AND QUALIFICATION Field Artillery home station Training Strategy	1-4
	SECTION III – EVALUATION, CONDITIONS AND STANDARDS	
	SECTION IV – UNIT TRAINING PLANS	
	SECTION V – UNIT TRAINING READINESS ASSESSMENT Collective Training Proficiency	
Chapter 2	FIRE SUPPORT AND FIELD ARTILLERY CERTIFICATION AND QU CONTENT	
	Description of Content Online Content Description of Online Content	2-1
	GLOSSARY	
	REFERENCES	References-1

Figures

Figure 1-1. Field Artillery Home Station Training Strategy	1-3
Figure 1-2. Field Artillery Certification and Qualification	1-5
Figure 1-3. Qualification Program of FA Delivery Formations	1-7
Figure 1-4. Process to evaluate, assess and report Training Readiness	.1-10
Figure 1-5. Process to evaluate, assess and report Training Readiness	.1-12
Figure 1-6. Example Collective Live-Fire Table Matrix	.1-16

Distribution Restriction: Approved for public; distribution is unlimited

*This publication supersedes TC 3-09.8, dated 1 February 2019.

Tables

Table 1-1. Commanders' Authorities	1-5
Table 1-2. Certification and Qualification Timeline	1-7
Table 1-3. Section/Team Qualification Criteria	1-8
Table 1-4. Disqualification Criteria of Units and FS Elements	1-9
Table 1-5. Overview of the Integrated Weapons Training Strategy 1	-14
Table 1-6. Firing Unit and Fire Support Element Support to IWTS Live-Fire Events	-15

Preface

The role of the Field Artillery (FA) is to destroy, defeat, or disrupt the enemy with integrated fires to enable maneuver commanders to dominate in unified land operations (ADP 3-19). To do this, the FA must remain a ready, worldwide deployable force able to dominate any operating environment through the integration, synchronization, and employment of organic, joint, and multinational fires. FA organizations must certify and qualify their technical tasks and skills to ensure commanders dominate their operational environment across large-scale ground combat operations.

FA and Fire Support Certification and Qualification is organized to train the FA System. Supported maneuver commanders follow the Integrated Weapons Training Strategy (IWTS) described in Training Circular (TC) 3-20.0. The IWTS live fire gates are organized into 6 tables by echelon. FA tables are identified from Table 1 through Table 18 and enable training across the delivery, sensor, and computational systems. FA Commanders and Fire Supporters at echelon must stress the importance of maneuver commanders and staff participating in FA tables at echelon. This serves to build the Commander/Fire Supporter relationship, increases maneuver understanding of how to provide sound guidance to Fire Supporters, and increases understanding of capabilities and limitations of the FA System.

TC 3-09.8 supports the mission of the Field Artillery by providing the means to certify and qualify Field Artillery Individuals, Teams, Crews, Sections, Platoons, Batteries and Battalions. The Field Artillery tables are intended to parallel and support Maneuver Tables 1–6 from the maneuver Platoon to Brigade Combat Team and are designed for artillery leaders at Battalion and below to assess the proficiency of their units to perform their mission and to sustain Field Artillery Core Competencies. The programs outlined in this manual follow the concepts and guidance provided in FM 7-0, *Train to Win in a Complex World and the Field Artillery Training Strategy*.

Commanders must reference TC 3-09.8 to plan, prepare, execute and assess Fire Support and Field Artillery Certification and Qualification training events as per guidelines within the Department of the Army (DA) requirements for their unit's readiness assessment. Ensuring units achieve section, platoon, battery and battalion certification and qualification supports the DA reportable readiness standards. In accordance with our Army's Mission Command (MC) philosophy, commanders are ultimately responsible for the readiness of their units. Deviations from certification and qualification requirements based on Mission, Enemy, Terrain, Troops & Time Available (METT-T) and TC 3-09.8 drive conversations between Commanders to identify risk and reduction measures.

TC 3-09.8 is structured into a base document (Chapter 1 and 2) delivered through the Army Publishing Directorate, with the remainder of the chapters and appendices delivered on the MilSuite web site under the management of the Directorate of Training and Doctrine, Fires Center of Excellence. Chapter 1 will include a complete introduction to the Theory of the Field Artillery Home Station Training Strategy, an explanation of certification and qualification, the standards and conditions of the evaluations, applying the strategy to unit training plans, and the linkage to a unit's training readiness assessment. Chapter 2 will briefly describe the location and description of the online content. All of the content on MilSuite will be flexible and will change, with approval of the Field Artillery Commandant, as weapons platforms are upgraded or updated, or certification/qualification standards change. Unit commanders and master gunners should continuously check the MilSuite TC 3-09.8 to ensure they are using the most up-to-date certification and qualification standards for their respective units and platforms.

This publication applies to the Active Army, the Army National Guard (ARNG), and the U.S. Army Reserve (USAR) unless otherwise stated.

The proponent for this publication is the United Stated Army Training and Doctrine Command. The preparing agency is the U.S. Army Field Artillery School. Submit changes for improving this publication on DA Form 2028 (*Recommend Changes to Publications and Blank Forms*) and forward to the Directorate of Training and Doctrine, Operational Training Division, Fires Center of Excellence, Fort Sill, Oklahoma 73503.

This page intentionally left blank.

Chapter 1 Introduction

This Training Circular (TC) provides the standards for implementing a Field Artillery (FA) Certification and Qualification Program which incorporates all components of the FA System within each FA formation at Battalion (BN) and below to include the Fire Support Elements which reside within all Brigade Combat Teams. This TC applies to all FA BNs whether in a Brigade Combat Team, Field Artillery Brigade or separate unit. The objective of the TC is to provide the basic requirements which will result in a safe, technically and doctrinally grounded, task oriented certification and qualification plan which trains our Teams, Crews, Cells, Sections, Platoons, Batteries, and Battalions to provide accurate fires to supported commanders. Field Artillery System requires integrating functions or tasks performed by the critical elements of the unit to provide timely and accurate fires. The Artillery Tables I-VI provide the commander with a systematic means of training, certifying and qualifying sections/crews/teams that are critical to the solution of the gunnery problem. The tables provide training from Military Occupational Specialty qualified individual tasks (Artillery Tables I) through collective training at the FA battalion level (Artillery Tables XVIII). The FA tables provide FA leaders and Soldiers with the "what" and "how" to train utilizing materials that are standard across the Army.

This TC provides a training strategy to help all FA units to become as accurate and responsive as possible given any condition in any environment. All FA units strive to achieve first round fire for effect. In order to accomplish this goal an artillery unit must compensate for nonstandard conditions as completely as time and the tactical situation permit. There are five requirements for achieving accurate first-round fire for effect. These requirements are accurate target location and size, accurate firing unit location, accurate weapon and ammunition information, accurate meteorological information, and accurate computational procedures. If these requirements are met, the firing unit will be able to deliver accurate fire cannot be met completely, the firing unit may be required to use adjust-fire missions to engage targets. Adjust-fire missions can result in reduced effect on the target, increased ammunition expenditure, and greater possibility that the firing unit will be detected by hostile target acquisition assets.

SECTION I – THEORY OF THE FIELD ARTILLERY HOME STATION TRAINING STRATEGY

1-1. FA commanders continuously assesses the unit's proficiency and readiness to meet the five requirements for achieving accurate fires and perform its mission essential tasks. Each commander implements certification and qualification programs to achieve and sustain unit readiness and proficiency in these tasks. The commander uses all the resources available to implement an efficient program; which maximizes the use of ammunition, training area availability, and Soldier training time to sustain proficiency. This TC provides an effective method for certification and qualification procedures. The artillery tables within this TC provide the standards for all components in the FA System, but do not limit commanders from adding to the standards and exercising disciplined initiative. This TC is also not a replacement for a

Commander's FA Safety Certification/Qualification Program or standard operating procedure, but should inform and be integrated into those Commanders' programs and documents.

1-2. Units execute effective individual and collective training based on the Army's principles of training. See ADP 7-0 for a discussion of each of these principles:

- Train as you fight.
- Training is commander driven.
- Training is led by trained officers and noncommissioned officers.
- Train to standard.
- Train using appropriate doctrine.
- Training is protected.
- Training is resourced.
- Train to sustain.
- Train to maintain.
- Training is multi-echelon and combined arms.

FIELD ARTILLERY HOME STATION TRAINING STRATEGY

1-3. The Field Artillery Home Station Training Strategy, figure 1-1 on page 1-3, identifies the logical progression of tables to train, certify and qualify the FA System. Each level includes training, certification and qualification requirements as well as requirements for external evaluation (EXEVAL) at echelon from individual through battalion. This framework serves as a guide for commanders to develop their training plan and assists in nesting that plan with their maneuver counterparts and commanders. Due to personnel turbulence and other operational environment considerations, commanders should execute disciplined initiative within the tables to leverage training events to generate the most readiness across the FA System.

- Level 1: Individual Skill Proficiency (Artillery Tables I)
- Level 2: Team and Crew Proficiency (Artillery Tables II-VI)
- Level 3: Initial Collective Training (Artillery Tables VII-XII)
- Level 4: Intermediate Combined Arms Collective Training (Artillery Tables XIII-XV)
- Level 5: Advanced Combined Arms Collective Training (Artillery Tables XVI-XVIII)

Note. Figure 1-2 on page 1-5, is an example of a way (Division Artillery (referred as DIVARTY) or equivalent) could adapt the home station training strategy to best fit the operational environment of its supported unit.

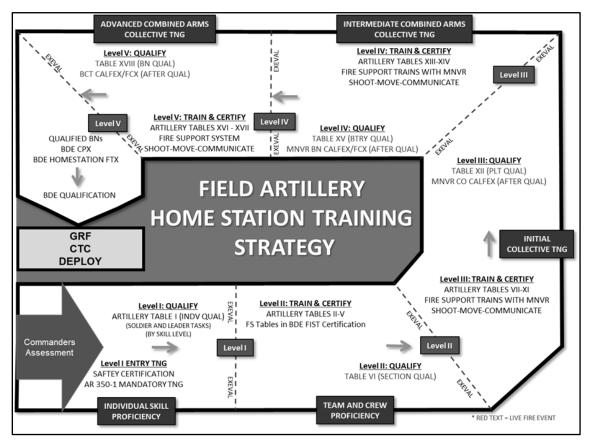


Figure 1-1. Field Artillery Home Station Training Strategy

1-4. This TC is designed and delivered to provide the most current individual, collective tasks and certification/qualification criteria. Chapter 1 provides the general information necessary for a unit commander to plan, prepare, execute and assess a certification and qualification program and is available through the Army Publishing Directorate. The technical content of the Fire Support and Field Artillery Certification and Qualification Tables are found beyond Chapter 2 and are in a repository online and maintained by the Fires Center of Excellence, Fort Sill. This delivery method allows agility for updates to individual or collective tasks. The details of the conditions, steps, and measures for all individual and collective tasks listed in the chapters are found in the Central Army Registry or the Digital Training Management System in which you can review and/or print the task specifications. The contents of this TC beyond Chapter 2 are found at https://www.milsuite.mil/book/groups/tc-3-098-field-artillery-gunnery and contain:

- Separate chapters for function specific tasks based on the associated system technical manuals for the equipment assigned to the section being trained.
- Separate chapters for the training, certification, and qualification of the platoon, battery and battalion.
- Focus on Fire Support and Field Artillery Certification and Qualification procedures, in the construct of an Army wide FA standard certification and qualification program, in a common tabular format which supports the TC 3-20.0, Integrated Weapons Training Strategy (IWTS) and AR 525-29.
- The tables provide crew/section/team qualification through collective training up to the battalion and Brigade Combat Team levels to support the commander's assessment of training readiness, in accordance with AR 220-1 (Army Unit Status Reporting and Force Registration-Consolidated Policies) and AR 350-1 (Army Training and Leader Development).

- The online chapters identify tasks required for training, certification and qualification, but detailed content of the task can be found in the Central Army Registry or Digital Training Management System. When planning, preparing or executing training units should always visit these online repositories to review the associated Training Evaluation and Outlines to ensure you are using the most current and update training document.
- This TC identifies the minimum required tasks for all elements in the FA System to achieve certification and qualification; however, in their own Unit standard operating procedures and Unit certification, qualification, and safety programs, commanders can add additional tasks to meet unit standards and mission requirements.

TRAINING STRATEGIES AND MODELS

1-5. This TC does not contain a unit training model. Instead, it provides a logical certification and qualification strategy to ensure that FA units are technically skilled at delivering accurate artillery fires in support of large-scale combat operations. The artillery tables represent a task-based strategy linked to required resources to assist the commander and training manager in the development of a large-scale combat operations focused program. The artillery training and standards in this TC are, by design, related to other available descriptive collective training strategies available to unit leaders. These strategies include the following:

- The Combined Arms Training Strategies for artillery batteries/battalions include a training strategy, supporting resources and recommended training events, training aids, devices, simulators, and simulations and supporting training support packages for the training of the artillery tables.
- The ammunition supporting this TC's certification and qualification plan is resourced by the strategy found in Chapter 3 of the DA PAM 350-38 (Standards in Weapons Training).

SECTION II – CERTIFICATION AND QUALIFICATION

FIELD ARTILLERY HOME STATION TRAINING STRATEGY

1-6. The Field Artillery Certification and Qualification Program is a collaborative effort between the institutional and the operational force as depicted in figure 1-2 on page 1-5. The United States Field Artillery School provides technically and tactically competent Soldiers to the operational force. Through training, education and experiences, today's FA Soldier becomes a vital member of a crew, cell, section or team in the operational force. To ensure proficiency, the operational force conducts individual, section and unit certification and qualification programs as outlined in this TC which are supported in the Combined Arms Training Strategy.

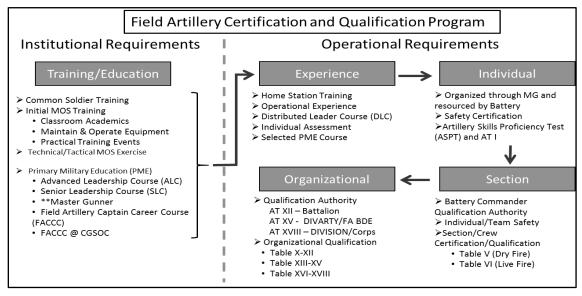


Figure 1-2. Field Artillery Certification and Qualification

Note. The Digital Training Management System is used to establish the individual Soldier Training Record. The unit will select the most technically proficient individual to attend the Master Gunner's course and assignment as the unit Master Gunner. The Master Gunner is the Battalion Commander's principle advisor for the Battalion's Certification and Qualification Program.

RESPONSIBILITIES OF COMMANDERS

1-7. Commanders at the Battery, Battalion, Division Artillery/FA Brigade, and Division/Corps levels have an integral role in the Field Artillery Home Station Training Strategy. They are responsible for establishing FA Certification, Qualification and Safety Programs and Standard Operating Procedures in compliance with the standards of this TC as well as the planning, resourcing and approval of training, certification, and qualification events. The table 1-1 below depicts the levels of authority for certifying and qualifying components of the FA System by echelon.

Echelon	Event	Authority
Individual (AT I)	Certification	Battery Commander
Team/Cell/Crew/Section (AT V)	Certification	Battery Commander
Team/Cell/Crew/Section (AT VI)	Qualification	Battery Commander
Platoon (AT XI)	Certification	Battalion Commander
Platoon (AT XII)	Qualification	Battalion Commander
Battery (AT XIV)	Certification	BCT/FAB Commander (advised by DIVARTY Commander)
Battery (AT XV)	Qualification	BCT/FAB Commander (advised by DIVARTY Commander)
Battalion (AT XVII)	Certification	Division / Corps Commander
Battalion (AT XVIII)	Qualification	Division / Corps Commander
BCTbrigade combat teamFABfield artillery brigadeDIVARTYdivision artillery		

Table 1-1. Commanders' Authorities

RESPONSIBILITIES OF THE MASTER GUNNER

1-8. The Master Gunner is the primary advisor and manager of the commander's certification and qualification program. FA Master Gunners are the commander's key resource and the unit focal point for administering the training and qualification programs in this TC. Master Gunners are selected for their education and technical skills in their military occupational specialty, training management, and individual instructor proficiency, as well as for breadth of proficiency in various artillery skills. A Master Gunner is an operations staff asset, having specified training management responsibilities for certification, qualification, technical standardization, and safety oversight. The Master Gunner is responsible for the selection, training, and certification of evaluators for implementing the tables in this TC. He will assist in the execution of the commander's safety certification program. The Master Gunner will also assist the commander in developing programs and training future Master Gunners in the organization. For a more detailed description of all Master Gunner duties and responsibilities see ATP 3-09.23 (Field Artillery Cannon Battalion).

- 1-9. The Master Gunner duties include-
 - Assist the integration of newly assigned Soldiers.
 - Sets up or conducts initial skills training for new personnel.
 - Assists in training new section members.
 - Trains and certifies section/team evaluators.
 - Assists all elements in the unit concerning certification and qualification.
 - Forecasts and manages ammunition for qualification and evaluations.
 - Manages certification and qualification records for individuals, teams, crews, sections, platoons, batteries, and the battalion.
 - Coordinates and controls training device use.
 - Plans and manages section/team simulations training.
 - Provides quality control supervision of all certification and qualification events.
 - Supervises live fire ranges to make sure all standards are followed and required safety measures implemented and adhered to.
 - Advises the commander on the turnover of key personnel and manning shortfalls at all echelons of the FA Delivery System.
 - Additional responsibilities are identified in Chapter 3 and 6.

CERTIFICATION

1-10. Certification is a safety focused assessment by the commanders at echelon that individuals and formations are proficient at the technical skills required to fire safely and accurately. Certification is conducted for all echelons prior to live fire qualification. Individual Certification (Artillery Tables I) is an event completed at battery level and is valid for 6 months. Artillery Tables I includes a position specific written test and a hands-on Artillery Skills Proficiency Test administered under the supervision of the Battalion Master Gunner/Digital Master Gunner/Fire Support Master Gunner and resourced by the Battery Commander. Artillery tables I artillery skills proficiency test tasks are identified and performed based on assigned position and not the individual's rank/grade. For example, a Specialist assigned in a Sergeant's position. Artillery tables V, XI, XIV and XVII (Dry Missions) are evaluated and used to validate the commander's recommendation of safety certification and should be completed prior to each echelon live fire qualification or requalification procedures. Certification is the commander's primary means to execute disciplined initiative in the management of his sections/teams/cells. Maintaining a robust certification program enables the commander to quickly certify new crews and have them in position for the next qualification training event.

QUALIFICATION

1-11. In addition to the skills listed in each chapter, field artillerymen at battalion and above echelons must maintain digital crews qualified in accordance with TC 6-0.1 and/or TC 6-0.2. A qualified digital crew can greatly assist the staff in the integration of the Warfighting Functions and the development of shared

situational understanding. Fires support element at the battalion level must maintain two qualified digital crews while brigade and higher echelons are required to have at least four qualified digital crews. Qualification of digital crews must be coordinated through the unit's Digital Master Gunner (referred as DMG).

1-12. Qualifications are evaluated live fire events conducted at various echelons in ATs VI, XII, XV and XVIII. The ATs for Qualification are conducted as identified in table 1-2, but can be increased in frequency as necessary in order to meet unit Training Readiness requirements. See Section V of this chapter for the relationship between the Artillery Tables for qualification and a unit's reportable levels of training readiness. Figure 1-3 identifies specific criteria for qualification.

Certification and Qualification Timeline						
Component	Artillery Skills Proficiency Test (ASPT)	Artillery Table (AT) VI	Artillery Table (AT)	Artillery Table (AT)	Artillery Table (AT)	
Regular Army	Semi-Annually	Semi-Annually	Annually	Annually	Annually	
Army National Guard	Annually	Annually	Twice ¹	Twice ¹	Once ²	

Table 1-2. Certification and Qualification Tim
--

Note: 1-ATX I and ATX V is conducted 2 times during either the 4 years or 5 years training model 2-ATX VII is conducted 1 time during either the 4 year or 5 year training model

1-13. Participation in higher-echelon live fire tables will reset the expiration window of each subordinate element's qualification. For example, if a firing section completes Table VI one month, then participates in Table XII, Table XV, and Table XVIII during subsequent months, and meets no other disqualification criteria, then that section is not disqualified until six months from the completion of the last collective live fire table. Certifying commanders may determine exceptions to qualification timelines and determine adequate measures to recertify echelons based on their assessment and unit-specific requirements. Figure 1-3 identifies the Qualification Program for FA Delivery Formations.

Written Test + ASPT (Position Specific Individual Tasks) = AT I Certified Individual

AT I Certification + AT V + AT VI = Qualified Crew

Qualified Crews + AT VII thru AT XI + AT XII = Qualified Platoon

Qualified Platoons + AT XIV + AT XV = Qualified Battery

Qualified Batteries + AT XVII + AT XVIII = Qualified Battalion

Figure 1-3. Qualification Program of FA Delivery Formations

Note. Fire Support Tables differ, refer to Chapter 6 for diagram and outline of the Fire Support Tables.

1-14. Table 1-3 on page 1-8, lists the minimum required personnel to operate as a team/crew/section to achieve certification and qualification. Decertification and disqualification occurs when the commander who has the authority for qualification deems that the qualified element violated a safety requirement, demonstrated inability to accurately deliver FA fires, or meets a pre-established criteria for loss of personnel

or elapsed time since last qualification (AT VI, XII, XV, and XVIII). For example, a battery commander or above can disqualify a section for demonstrating unsafe crew procedures during a live fire event, or the section lost the requisite number of key personnel. Table 1-4 on page 1-9, lists the disqualification criteria beyond Artillery Tables VI.

Minimum Personnel Requirements					
Element		Critical Personnel	Qualification Requirement		
How	vitzer, M119				
How	vitzer, M109	COS, Gunner			
How	vitzer, M777		Artillery Table (AT) VI (Live-Fire)		
Launche	ers, M270/M142	COS, Gunner	in the last 6 months.		
FDC	C/BOC/POC	FDO, Fire Control Sergeant, Fire Direction Computer			
Dism	ounted FIST	FSO, FS NCO			
Мо	unted FIST	FSO, FS NCO, Driver	Main Gun Platform Gunnery Table VI and Artillery Table (AT) VI in the last 6 months.		
Radar	Section (Q36)	Section Chief, Senior FF Radar Operator	Artillery Table (AT) VI (Live- Fire) in the last 6 months.		
Radar	Section (Q53)	Section Chief, Senior FF Radar Operator	Artillery Table (AT) VI (Live-Fire)		
Radar	Section (Q50)	Section Chief, Senior LCMR Operator	in the last 6 months.		
	Survey	TBD			
AT art AG ass BOC ba COS ch FDC fire FDO fire FF fire FIST fire FS fire FSO fire LCMR lig NCO not PADS po POC po	innunition team chief illery table sistance gunner ttery operation chief ief of section e direction center e direction officer e support team e support officer htweight counter fire m ncommissioned officer sition and azimuth det int of contact be determined				

Table 1-3. Section/Team Qualification Criteria

Disqualification Criteria						
Element	Critical Personnel	Loss of Critical Personnel	Qualification Expiration			
Firing Platoon	PL, PSG, GNY SGT	Loss of two or more critical personnel or loss of 2 or more Section Chiefs (to include FDC) since last AT XII qualification.	> *6 Months AC > *1 Year RC			
Company FIST	Company FSO, FS NCO	Loss of both critical personnel since last AT XII qualification.	> *6 Months AC > *1 Year RC			
Firing Battery	Battery CDR, 1SG, XO/OPS OFF, OPS NCO	Loss of two or more critical personnel or loss of 2 or more PLs or PSGs since last AT XV qualification.	> *6 Months AC > *1 Year RC			
BN Fires Cell	BN FSO, FS NCO	Loss of at least two critical personnel since last AT XVIII qualification.	> *6 Months AC > *1 Year RC			
Counterfire Cell	Counterfire Officer, FA Targeting NCO	Loss of one or more critical personnel or the loss of more than 50% of Target Procession Specialist	> *6 Months AC > *1 Year RC			
FA Battalion	BN CDR, CSM, XO, S3, OPS NCO, FDO, FD NCO	Loss of three or more critical personnel or loss of four or more critical personnel at the battery level since last AT XVIII qualification.	> *6 Months AC > *1 Year RC			
BCT Fires Cell	FS COORD (BN CDR), BDE FSO, TGT Officer, FSNCO	Loss of two or more critical personnel since last AT XVIII qualification.	> *6 Months AC > *1 Year RC			
battalion commander command serger field artillery fire direction cer fire direction offit fire support team fire support offic fire support offic fire support gunnery sergear noncommissione operations platoon leader platoon sergean reserve compon	ant major nter cer n er nt ed officer					
	Firing Platoon Company FIST Firing Battery BN Fires Cell Counterfire Cell FA Battalion BCT Fires Cell active compone brigade combatt battalion commander commander command serge field artillery fire direction cer fire direction cer fire support tear fire support fire fire support fire support fire gunnery sergear noncommissione operations platoon leader platoon sergean	ElementCritical PersonnelFiring PlatoonPL, PSG, GNY SGTCompany FISTCompany FSO, FS NCOFiring BatteryBattery CDR, 1SG, XO/OPS OFF, OPS NCOBN Fires CellBN FSO, FS NCOCounterfire CellCounterfire Officer, FA Targeting NCOFA BattalionBN CDR, CSM, XO, S3, OPS NCO, FDO, FD NCOBCT Fires CellFS COORD (BN CDR), BDE FSO, TGT Officer, FSNCOactive component brigade combat team battalion commander commanderFS COORD (BN CDR), BDE FSO, TGT Officer, FSNCOactive team battalionFS COORD (BN CDR), BDE FSO, TGT Officer, FSNCOactive component brigade combat team battalion commanderFS COORD (BN CDR), BDE FSO, TGT Officer, FSNCOactive component brigade combat team battalion commanderFS COORD (BN CDR), BDE FSO, TGT Officer, FSNCOactive component brigade combat team battalion commander commander commander command sergeant major field artillery fire direction officer fire support for fire support for fire support for fire support for fire support sergeant noncommissioned officer operations platoon leader platoon sergeant reserve component	Element Critical Personnel Loss of Critical Personnel Firing Platoon PL, PSG, GNY SGT Loss of two or more critical personnel or loss of 2 or more Section Chiefs (to include FDC) since last AT XII qualification. Company FIST Company FSO, FS NCO Loss of both critical personnel since last AT XII qualification. Firing Battery Battery CDR, 1SG, XO/OPS OFF, OPS NCO Loss of two or more critical personnel or loss of 2 or more PLs or PSGs since last AT XV qualification. BN Fires Cell BN FSO, FS NCO Loss of at least two critical personnel since last AT XVIII qualification. Counterfire Cell Counterfire Officer, FA Targeting NCO Loss of one or more critical personnel or loss of four or more than 50% of Target Procession Specialist FA Battalion BN CDR, CSM, XO, S3, OPS NCO, FDO, FD NCO Loss of two or more critical personnel or loss of four or more critical personnel since last AT XVIII qualification. BCT Fires FS COORD (BN CDR), ESC, TSC Officer, FSNCO Loss of two or more critical personnel since last AT XVIII qualification. active component brigade combat team batalion commands ergeant major field artillery fire direction enter fire support officer fire support ficer fire support ficer fire support officer platoon sergeant reserve component Fin Support Since fice support ficer fire support officer platoon sergeant reserve component			

*Note: Participation in higher-echelon live fire tables will reset the expiration window of each subordinate element's qualification. For example, if a firing section completes Table VI one month, then participates in Table XII, Table XV, and Table XVIII during subsequent months, and meets no other disqualification criteria, then that section is not disqualified until six months from the completion of the last collective live fire table. Certifying commanders may determine exceptions to qualification timelines and determine adequate measures to recertify echelons based on their assessment and unit-specific requirements.

SECTION III – EVALUATION, CONDITIONS AND STANDARDS

1-15. Training is the most important thing the Army does to prepare for operations and is the cornerstone of readiness. Readiness determines our Nation's ability to fight and win in a complex global environment. To achieve a high degree of readiness, the Army trains in the most efficient and effective manner possible. Realistic training with limited time and resources demands that commanders focus their unit training efforts to maximize training proficiency. Therefore, an objective way to assess and evaluate unit readiness is critical to mission accomplishment and survival on the battlefield. Figure 1-4 on page 1-10, supports the linkage from training to assessing and reporting training readiness.



Figure 1-4. Process to evaluate, assess and report Training Readiness

EVALUATION

1-16. Evaluations can be internal or external. Internal evaluations are conducted at all levels, and they must be a routine component of all training. EXEVALs are usually more formal and are normally conducted by a headquarters two echelons above the unit being evaluated. "Evaluations may be informal, formal, internal, external or any combination of these" (FM 7-0). Refer to FM 7-0 for definitions and criteria for evaluations. Commanders and units conduct and document training proficiency during any and all training events using the Objective Task Evaluation Criteria Matrix in the tasks Training Evaluation and Outline. All training events require one of these types of evaluations. However, evaluations for certification and qualification tables must be conducted by a certified evaluator appointed by the appropriate commander who has the authority for the evaluation.

1-17. A Technical Evaluation is an external validation of qualified sections/teams/crews, platoons, batteries and battalions. All certifications and qualifications are evaluated to ensure an organization's technical ability to shoot, move and communicate while conducting the mission of the FA. Evaluation of the unit's technical ability is different than a fully resourced EXEVAL. It is not necessary to conduct an EXEVAL in conjunction with a Live Fire event. EXEVAL must be approved by the commander two echelons higher than the unit being evaluated. The EXEVAL is a resource intensive event that requires external evaluators, a white cell, combatants, and multiple enemy threats used to exercise the organizations ability to survive on the battlefield.

1-18. EXEVALs are unit proficiency evaluations. They are formal in nature and conducted external to the unit. The EXEVAL provides commanders with an objective way to evaluate their unit mission-essential tasks or selected collective task proficiencies. All units in the Army undergo an EXEVAL to validate task proficiency ratings.

1-19. An EXEVAL includes the following key requirements:

- The higher commander two levels up approves the plan and resources it (for example, a brigade approves and resources a battery-level EXEVAL). Forecasts and manages ammunition for qualification and evaluations.
- The commander resources the conditions to achieve a minimum of T or T- task proficiency rating.
- The higher commander (one or two levels up) trains and certifies evaluators for Artillery Tables VI and external observer, coach/trainers for AT XII, XV and XVIII. The senior observer, coach/trainer can be from an adjacent unit within the higher command of the unit evaluated.
- Training and evaluation outlines are the objective basis of the evaluation.
- The higher commander two levels up supervises the final after action review.
- The commander (one level up) discusses with the unit commander the expected proficiency levels for mission-essential tasks and battle tasks (to include battle drills) and overall level of proficiency for readiness reporting units (see AR 220-1).

FULL OPERATIONAL CAPABILITY AND DEGRADED REQUIREMENTS

1-20. To be successful in fighting large-scale combat operations, FA units should train to consistently meet the 5 requirements for accurate predicted fire to include in a degraded, disrupted, or denied operational environment which can and will effect systems which rely on digital communications, positioning, navigation, and/or timing. An FA Battalion's Certification and Qualification program must include the performance of technical FA tasks in various conditions to best prepare for large-scale combat operations. To do so, units should follow the FA Home Station Training Strategy's guidance. To follow this guidance, a

unit's program should perform its tasks using its full operational capability, digital systems in a degraded capacity, and with fully degraded backup methods.

1-21. In large-scale combat operations, FA units will experience conditions that impact the ability to maintain the 5 requirements for accurate predicted fire which can be caused by the enemy or the environment. FA units maintain the capability to provide fire support in support of the maneuver commander. To do this, we must train across the spectrum of impacts to our communications, computational, target location, and delivery means. The following definitions define the degraded, disrupted, or denied operational environment:

- Denied conditions; access to Global Position System and digital communications via space capabilities are not available.
- Disrupted conditions; access to Global Position System and digital communications via space capabilities are intermittent and are not available consistently.
- Degraded conditions; equipment and/or systems are working at a reduced effectiveness and alternative means must be utilized to maintain FA capabilities.

1-22. A degraded environment dictates the use of manual tools, near precision ammunition and substituted procedures when equipment is not functioning properly.

PRECISION AND AREA FIRES REQUIREMENTS

1-23. The ability of FA formations to deliver both precise and area fires utilizing both digital and manual means is the key to success of the FA during large-scale combat operations. The goal of the Field Artillery is to achieve first round fire for effect. The standard target location error for precision capabilities is < 6 meters. The target location error for conducting area fire missions < 50 meters. Training, certifying and qualifying for both precision and area fire methods is necessary to ensure FA units can fully support large-scale combat operations. For example, to fully evaluate precision capabilities of the FA System, Fire Support Element ensure the use of precision tools and identifies the use of a precision ammunition fired by the howitzer section. Area fires are accomplished when the Fire Supporter utilizes their best available means of target location for target identification without requiring a precision ammunition.

PROGRESSION OF COMPLEXITY

1-24. A unit's FA certification and qualification plan will progressively increase in complexity as the unit successfully completes each level in the strategy. The complexity increases in the types of munitions fired, the echelon and integration of each component of the FA System, and the addition of complexity and range of tasks in each table. The Field Artillery Progression of Complexity is simplistically shown in green text boxes in the figure 1-5 on page 1-12.

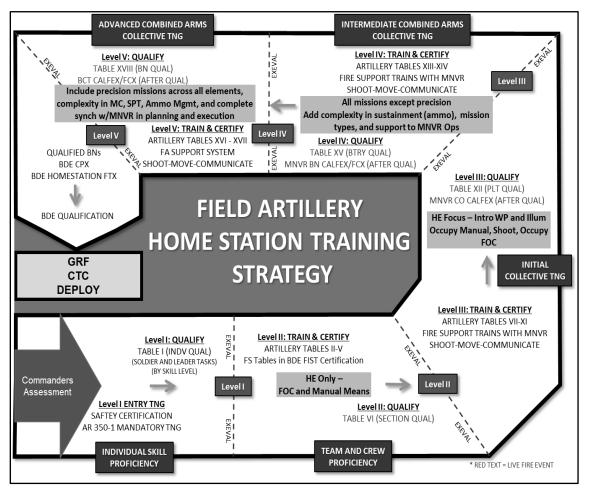


Figure 1-5. Process to evaluate, assess and report Training Readiness

SECTION IV – UNIT TRAINING PLANS

1-25. The artillery tables were developed and identify the certification and qualification of FA sections/crews/teams, platoons, batteries and battalion in support large-scale combat operations. FA Commanders must ensure that field artillery fires provide support to the maneuver commanders in the most demanding and complex environments. Units should train, certify, qualify and sustain proficiency for deployment at a moment's notice.

COMMANDERS ASSESSMENT

1-26. A unit's training and evaluation plan must be specifically designed to achieve, improve, and sustain technical proficiency. The commander must continually assess the unit's previous performance, current level of training, currency of key personnel, and weapon platform maintenance to determine its level of proficiency. The Master Gunner should advise the commander and assess, plan, develop, implement, instruct, evaluate, and reassess all phases of certification and qualification. The commander's ongoing assessment is crucial to developing the certification and qualification plan.

1-27. The following factors must be considered during the assessment:

• Previous training. The commander assesses training with input from the command sergeant major, executive officer, S-3, subordinate leaders, and Master Gunners (see ADP 7-0). Specific performance at the following events should drive the focus of a training program:

- Individual and crew training.
- Informal, internal assessments from unit leaders.
- Formal, external assessments of evaluators.
- Collective training proficiency (previous ATs VII-XVIII, Combined Training Center, BN and BCT Fires Coordination Exercise, field-training exercise, situational training exercise, etc.).
- Turnover of key personnel since last qualification.
- Training days available.
- Resources available.
- The unit's specific METL.
- Trainers and Evaluators.
- Performance in simulators, as available.
- Maintenance status.

INTEGRATING FIELD ARTILLERY HOME STATION TRAINING STRATEGY

1-28. FA Commanders and their staffs are responsible for the implementation of the FA Home Station Training Strategy into their unit training plans. The strategy is designed to be implemented in Levels from individual through battalion. All elements of the FA System should generally follow the Artillery Table to ensure all components are prepared to be in the "run" phase of training together in the highest levels of collective training (Artillery Tables XVIII, for example). However, based on personnel turnover, training calendars, and other obstacles, commanders should not wait for the rest of the FA System to re-qualify crews and platoons. For example, a radar section was recently de-certified due to loss of key personnel. The commander may direct that section to proceed up to Table V and participate in the next collective live fire table to qualify them at Table VI.

SUPPORTING THE TC 3-20.0, INTEGRATED WEAPONS TRAINING STRATEGY (IWTS)

1-29. FA Battalions that provide Direct Support Fires to brigade combat teams must integrate their fires into maneuver collective live fire training events. Brigade combat teams follow a strategy which builds from the individual level qualification to battalion and brigade level collective live fire events like the fire coordination exercise and a combined arms live fire exercise. This progressive training strategy for maneuver formations in brigade combat teams which Standardizes all maneuver training strategies under a common structure is found in the TC 3-20.0, Integrated Weapons Training Strategy. Rather than using a progression of tables, the IWTS uses tiers and gates which are aligned with the collective and live-fire proficiency gates used with the Leaders Guide for Training Proficiency. Table 1-5 on page 1-14, graphically depicts the IWTS from team to battalion.

		-	-			
	Table I	Table II	Table III	Table IV	Table V	Table VI
Echelon	PREREQ	PREREQ	PREREQ	Collective Task Proficiency	COORD / Rehearsal / Practice	Live-Fire Proficiency Gate
	CRAWL	CRAWL	WALK	RUN	RUN	RUN
Detteller	TEWT	STAFFEX	CPX	FTX	FCX	CALFEX
Battalion	Live	Blended	Live	TADSS	Blended	Live-Fire
0	TEWT	STX-V	STX	FTX	FCX	CALFEX
Company	Live	Virtual	TADSS	TADSS	Live-Fire	Live-Fire
Platoon	CLASS					
Section	SOP Live	STX-V Virtual	STX TADSS	FTX TADSS	FCX Live-Fire	LFX Live-Fire
Squad	LIVO					
Mortar Formation				FTX		
	GST	STX-V	STX	TADSS	Practice	Qualification
Crew Platform	Live	Virtual	TADSS	Basic	Live-Fire	Live-Fire
				Live-Fire		
Special Purpose Weapons			Defile	Davia	Duration	Qualification
Crew-Served Weapons	PMI&E Live	PLFS Virtual	Drills TADSS	Basic Live-Fire	Practice Live-Fire	Qualification Live-Fire
Individual Weapons						
CALFEXcombined arms live fire exerciseCOORDcoordinationCPXcommand post exerciseEXEVALexternal evaluationFCXfire coordination exerciseFTXfield training exerciseGSTgunnery skills testLFXlive fire exercisePLFSpreliminary live fire simulationsPMI&Epreliminary marksmanship instruction and evaluationPREREQprerequisiteSOPstandard operating proceduresSTAFFEXstaff exerciseSTXsituational training exerciseTADSStraining aids, devices, simulators, and simulationTEWTtactical exercise without troops						
V virtual train	ning environmer	it				

Table 1-5. Overview of the Integrated Weapons Training Strategy

1-30. In order to integrate fires into the IWTS live fire gates, FA units must ensure they are qualified at providing artillery fires safely and accurately into the maneuver plan. They must validate their ability to support IWTS live fire events through their qualification events in the artillery tables. For example, a FA platoon is allowed to participate in an infantry company combined arms live fire exercise only after they have successfully qualified through an evaluation of the tasks required in artillery table XII. Table 1-6 on page 1-15, lists the minimum level of support to each IWTS live-fire event listed in TC 3-20.0 and the prerequisites required.

IWTS Event	FA Elements (highest echelon)	Pre-Requisite	Missions per Iteration
CO (FCX), Table V	Cannon Firing Platoon,	Cannon Artillery Table XII (PLT	1x Deliberate TGT (HE)
	CO FIST, Platoon FO	Qualification) and Fire Support XI (PLT FO Certification)	1x Dynamic TGT (HE)
		FO Certification)	1x Immediate Smoke (Day)
			1x Illumination (Night)
CO (CALFEX), Table	Cannon Firing Platoon,	Cannon Artillery Table XII (PLT	1x Deliberate TGT (HE)
VI	CO FIST, Platoon FO	Qualification) and Fire Support XI (PLT	1x Dynamic TGT (HE)
		FO Certification)	1x Immediate Smoke (Day)
			1x Illumination (Night)
BN (FCX), Table V	Battalion FSE, CO FIST,	Cannon Artillery Table XV and Fire Support Table XIV	1x HE Fire Plan (3 TGTs)
().			1x Quick Smoke (Day)
	Platoon FO		1x IR Illumination (Night)
BN (CALFEX), Table	Cannon Firing Battery, Battalion FSE, CO FIST, Platoon FO	Cannon Artillery Table XV and Fire Support Table XIV	1x HE Fire Plan (3 TGTs)
νι ″			1x Quick Smoke (Day)
			1x IR Illumination (Night)
CO company FO forward of FCX fire coordi FIST fire suppo FSE fire suppo HE high explo IR Infrared	nation exercise rt team rt element		

Table 1-6. Firing Unit and Fire Support Element Support to IWTS Live-Fire Events

SECTION V – UNIT TRAINING READINESS ASSESSMENT

COLLECTIVE TRAINING PROFICIENCY

1-31. The training evaluation and outline for each task identifies the conditions that must be achieved and a standard that measures the successful performance of the task. Performance steps and measures not only list what needs to be accomplished and evaluated but also include the leader and critical steps that must be completed. Each task performance step and measure is graded either "GO" or "NO-GO." In order to assess a task and give a "T, T-, P, P- or U" rating, we have attempted to identify a criterion that encompasses more objectivity and satisfies the needs of the commanders. Keeping in mind that the commander has the ultimate responsibility of rating a task, the method below represents one way to assess tasks. It cannot possibly take into account all possible situations and apply mission, enemy, terrain, troops and time available and civil considerations to the assessment.

MISSION ESSENTIAL TASK PROFICIENCY

1-32. A mission essential task is a collective task on which an organization trains to be proficient in its designed capabilities or assigned mission. A METL is a tailored group of mission-essential tasks. (FM 7-0) Headquarters Department of the Army approves standardized METLs for each echelon and unit type from battery through corps. An FA unit's certification and qualification program provides some opportunities to assess the mission essential task, but are not the only training events used to determine mission essential task proficiency or other categories of training readiness assessment. Standardized METLs are available on the Army Training Network, in Digital Training Management System and are used to develop the unit Combined Arms Training Strategy.

1-33. Mission essential tasks are collective task that are assessed through the use of training and evaluation outlines. Several unit mission essential tasks can and will be evaluated during the execution of the FA Home Station Training Strategy's Artillery Tables as outlined in this TC. For example the collective task, "Conduct Battalion Fire Missions (06-BN-5001)" is a DA Standardized mission essential task for all FA battalions. When an FA battalion conducts an artillery table XVII or XVIII event, this mission essential task is evaluated; and therefore, its evaluated assessment can be used in reporting the battalion's next training readiness assessment. For the evaluation of a collective task, the training and evaluation outlines 'stands alone' as the approved standard for the collective task and the supporting collective tasks' training and evaluation outlines are not aggregated to the supported collective task.

COLLECTIVE LIVE-FIRE PROFICIENCY

1-34. Collective live-fire task proficiency is based on evaluation of a collective task(s) trained and evaluated under live-fire conditions and standards as defined in the task(s) training and evaluation outlines. Collective live-fire tables are a unit's unique diagram that depicts the collective live-fire training exercises (live-fire exercise, combined arms live fire exercise, fire coordination exercise) for live-fire progression from the lowest collective training echelon (e.g. Section) to the battalion level (e.g. BN). Artillery tables are directly linked to the collective live fire exercise requirements for most FA units. Figure 1-6 below identifies the qualification criteria for a FA Battalion Composite organization. As previously mentioned in paragraph 1-21, notice the mission essential task for Conduct Battalion Fire Missions (06-BN-5001) is the overall evaluated collective task during Artillery Tables XVIII.

Field Artillery Battalion Composite (BCT)	Field Artillery Battalion (SBCT)	Field Artillery Battalion (155SP) (ABCT)		
SRC: 06235K100, 06235K300, 06325K000, 06385K0000	Field Artillery Battalion (Composite)(BCT) Field Artillery Battalion (SBCT) Field Artillery (ABCT)	GROUP 4		
Echelon	Collective Task ¹			
Battalion	06-BN-5001 Conduct Battalion Fire Mission			
Battery				
Platoon				
Section				
Collective LFX requirement determined through Commander to Commander Dialogue				

Figure 1-6. Example Collective Live-Fire Table Matrix

Chapter 2

Fire Support and Field Artillery Certification and Qualification Content

The Fire Support and Field Artillery Certification and Qualification manual is delivered through milBook web site, providing social media capabilities, enhancing collaboration and agile artillery content delivery, within the Army Knowledge Online (referred as AKO) and the Fires Knowledge Network (referred as FKN) communities. Access to milBook requires appropriate online credentials or a registered common access card (referred as CAC). The paragraphs in this chapter summarize the content of chapters 1 through 12 and appendices A through I of the Fire Support and Field Artillery Certification and Qualification manual, TC 3-09.8.

DESCRIPTION OF CONTENT

2-1. This TC is designed and delivered to provide the most current individual, collective tasks and certification/qualification criteria. Chapter 1 and 2 provides the general information necessary for a unit commander to plan, prepare, execute and assess a certification and qualification program and is available through the Army Publishing Directorate. The technical content of the FA tables are found beyond chapter 1 and 2 in a repository online and maintained by the Fires Center of Excellence, Fort Sill. This delivery method allows agility for updates to individual or collective tasks. The details of the conditions, steps, and measures for all individual and collective tasks listed in the chapters are found in the Central Army Registry or the Digital Training Management System in which you can review and/or print the task specifications. The contents of this TC beyond chapter 1 and 2 can be found at https://www.milsuite.mil/book/groups/tc-3-098-field-artillery-gunnery.

ONLINE CONTENT

2-2. MilBook portal users must comply with information security policies and procedures, before logging in. Users must read the U.S. Government Disclaimer and the Department of Defense Privacy Act Statement. They must not enter classified tactics, techniques, and procedures currently in use for military operations. It is the responsibility of the command to ensure proper portal use, consistent with AR 380-5. In addition, it is the command's responsibility to ensure compliance with AR 380-10 for foreign disclosure.

2-3. Combined Arms Doctrine Directorate, United States Army Combined Arms Center, and the Fire Center of Excellence host the milBook and FCoE portals. Users may click on the following hyperlink or paste it into a Web browser: <u>https://www.milsuite.mil/book/groups/tc-3-098-field-artillery-gunnery</u>, this takes users directly to the portal, by way of a milBook login page.

DESCRIPTION OF ONLINE CONTENT

2-4. Chapter 3: Cannon Howitzer - This chapter provides a methodology for training and evaluating individuals and crews/sections on the tasks required to safely emplace, prepare for firing, execution of howitzer fire missions, and displacement of the M109A6/7, M119A2/3 and the M777A2 howitzer systems.

2-5. Chapter 4: Multiple Launch Rocket System (referred as MLRS)/High Mobility Artillery Rocket System (referred as HIMARS) - This chapter provides a methodology for training and evaluating individuals and crews/sections on the tasks required to safely emplace, prepare for firing, execution of Multiple Launch

Rocket System (referred as MLRS)/High Mobility Artillery Rocket System (referred as HIMARS) fire missions, ammunition resupply and displacement of the M270A1 and M142 launcher systems.

2-6. Chapter 5: Fire Direction Center (referred as FDC) - This chapter provides a methodology for training and evaluating individuals and crews/sections on the task required to initialize and prepare the Advanced Field Artillery Tactical Data System for operations, acquire and process meteorological data, validate technical and tactical fire mission data, process precision and area fire mission requirements and ensure continuity of operations in all conditions at the FDC, Battery Operations Center Platoon Operations Centers and the Fire Control Element for all FA organizations.

2-7. Chapter 6: Fire Support - This chapter provides a standard methodology for training and evaluating fire support officers, fire support noncommissioned officer, forward observers, fire support teams and fire support element. Certification focuses on accurate target location and description during the conduct of precision and area fire missions in support of the maneuver commander and the operational force. The certifying individual tasks support the joint targeting standards and enforce the Joint Fires Observer (referred as JFO) sustainment program at the unit level to train and certify JFO, as identified by the FA Commandant and endorsed by the Joint Fires Observer Executive Steering Committee. The JFO phased approach has been superseded.

2-8. Chapter 7: Counterfire - This chapter provides a standard methodology for training and evaluating individual tasks for the counterfire cell. The counterfire cell is trained and qualified to plan and conduct counterfire operations to destroy or neutralize enemy indirect weapon systems.

2-9. Chapter 8: Weapons Locating Radar System - This chapter provides a standard methodology for training and evaluating individuals and crews/sections on the task required to safely emplace, prepare for operations, conduct radar operations and the displacement of the AN-TPQ-50 and AN-TPQ-53 Weapons Locating Radar Systems. The AN-TPQ-36 certification and qualifications are addressed in Appendix I.

2-10. Chapter 9: Field Artillery Survey - This chapter provides a standard methodology for training and evaluating individuals and crews/sections on the tasks required to prepare their equipment for operations, establish declination stations, and establish and identify survey control points in support of the FA weapons systems.

2-11. Chapter 10: Platoon Collective Field Artillery Tables (AT VII-XII) - This chapter provides a standard methodology for training and evaluating FA platoons on the collective tasks necessary to deliver timely and accurate fires. Crews/Sections work together in platoon size elements to conduct reconnaissance, movement, occupation and fire mission processing in support of the mission and large-scale combat operations. Collective task are trained and conducted during live-fire exercise, field training exercise or field training exercise EXEVALs. Training and evaluation of accurate indirect firing capabilities at the platoon level are necessary to ensure continued fire support of the maneuver commander and the operational force.

2-12. Chapter 11: Battery Collective Field Artillery Tables (AT XIII-XV) - This chapter provides a standard methodology for training and evaluating the FA battery on the collective tasks necessary to destroy, neutralize or suppress the enemy by cannon/rocket fires during the support of the operational forces. Collective tasks are trained and conducted during live-fire exercise, field training exercise or field training exercise EXEVALs. Artillery tables XIII, Artillery tables XIV and Artillery tables XV demonstrate battery level proficiency in establishing operations and processing cannon/launcher fire missions. Training and evaluation of precision and non-precision capabilities at the battery level are necessary to ensure a role of destroying, defeating or disrupting the enemy with integrated fires to enable maneuver commanders to dominate in unified land operations.

2-13. Chapter 12: Battalion Collective Field Artillery Tables (XVI-XVIII) - This chapter provide a standard methodology for training and evaluating the FA battalion on the collective tasks necessary to destroy, neutralize or suppress the enemy by cannon/rocket fires in support of the operational requirements and large-scale combat operations. Collective tasks are trained and conducted during live-fire exercise and field-training exercise EXEVALs. Artillery tables XVI, Artillery tables VII and Artillery tables XVIII establish battalion proficiency in executing battalion level fire missions, fire plans and counterfire operations. Training and evaluation of precision and non-precision capabilities at the battalion level are necessary to ensure a role of destroying, defeating or disrupting the enemy with integrated fires to enable maneuver commanders to dominate in unified land operations.

2-14. Appendix A: Safety - This appendix provides basic rules for preventing firing incidents. Individuals make errors, and the best safeguard against those errors is the use of established time tested safety procedures and an independent double check of all operations in which human error could cause a firing incident.

2-15. Appendix B: Calculation of the Executive Officer's (referred as XO) minimum quadrant elevation (referred as QE) - This appendix provides leaders with the knowledge, skills and method to manual calculate the XO min QE or use the Rapid Fire Tables to extract the XO min QE for cannon systems, propellants and fuses. Tabular Firing Tables and Rapid Fire Tables are available on the Army Knowledge Online (referred as AKO) site via web link that is provided in this appendix.

2-16. Appendix C: Field Artillery Home Station Training Strategy - This appendix provides examples for all FA battalions to plan, execute and assess the FA Home Station Strategy. Based on the FA unit type, the examples provide implementation guidance for individual to battalion level collective training and how it links to operational requirements and support the maneuver commander's collective training events. This example is supported by the unit Combined Arms Training Strategy and are instrumental when planning and conducting training.

2-17. Appendix D: Time and Accuracy Standards - This appendix identifies that accurate and timely artillery fires are critical for mission accomplishment and battlefield survival of the maneuver force. Recognizing this, FA units continue to improve their fire mission response time. The time standards in this Appendix represent the maximum amount of time a well-trained FA unit takes to place accurate fire on target. Accurate field artillery fires are a mandate, and no amount of speed in response times displaces this requirement. Trainers should be acutely aware of this fact and stress accuracy foremost in their training programs. As teamwork improves through training, response time should decrease without sacrificing accuracy.

2-18. Appendix E: Sample Written Exams - This appendix provides examples of written examinations that can be used for your unit training and certification programs and sample task for Leader's hands-on component test. The test provided are purely examples and should be revised and maintained by the unit master gunner. Test and answers are required to be controlled by the unit master gunner.

2-19. Appendix F: M28A1/A2 Rocket Crest Clearance Tables - This appendix provides leaders with a planning tool to assess the impact of intervening crests on rocket trajectories.

2-20. Appendix G: Firing Incidents and Troubleshooting - This appendix provides further detail on the Five Requirements and their role in providing accurate fires for supported maneuver commanders. It additionally provides a checklist for FA leaders to consider in troubleshooting inaccurate fires.

2-21. Appendix H: Field Artillery Marksmanship Qualification – This appendix provides the requirements for Soldiers to be eligible to wear the "Field Arty" bar, on the U.S. Army Marksmanship Qualification Badge. Additionally, it discusses the standards of precision applying to all evaluated tasks, qualification scores determining the status of graded Soldiers, and collective tasks being graded.

2-22. Appendix I: 13R AN-TPQ-36 Firefinder Radar – This appendix provides a standard methodology for training and evaluating individuals and crews/sections on the task required to safely emplace, prepare for operations, conduct radar operations and the displacement of the AN-TPQ-36 Radar system.

This page intentionally left blank.

Glossary

SECTION I – ACRONYMS AND ABBREVIATIONS

BN	battalion
DA	Department of the Army
EXEVAL	external evaluation
FA	field artillery
IWTS	Integrated Weapons Training Strategy
METL	mission essential task list
ТС	training circular

This page intentionally left blank.

References

All URLs were accessed 2 March 2020.

REQUIRED PUBLICATIONS

These sources must be available to the intended users of this publication. ADP 1-02, Terms and Military Symbols. 14 August 2018. DOD Dictionary of Military and Associated Terms, January 2020.

RELATED PUBLICATIONS

These documents contain relevant supplemental information.

ARMY PUBLICATIONS

Most Army doctrinal publications are available on-line: https://armypubs.army.mil ADP 3-19. Fires, 31 July 2019. ADP 7-0. Training, 31 July 2019. AR 220-1. Army Unit Status Reporting and Force Registration - Consolidated Policies, 15 April 2010. AR 350-1. Army Training and Leader Development, 10 December 2017. AR 380-5. Army Information Security Program, 22 October 2019. AR 380-10. Foreign Disclosure and Contacts with Foreign Representatives, 14 July 2015. AR 525-29. Force Generation – Sustainable Readiness, 1 October 2019. ATP 3-09.23. Field Artillery Cannon Battalion, 24 September 2015. DA Pam 350-38. Standards in Weapons Training, 26 September 2019. FM 7-0. Train to Win in A Complex World, 5 October 2016. TC 3-20.0. Integrated Weapons Training Strategy (IWTS), 18 June 2019. TC 6-0.1. Mission Command Information System Integration Training and Qualification: Digital Crews, 10 May 2018. TC 6-0.2. Training the Mission Command Warfighting Function for Battalions, Brigades, and Brigade Combat Teams, 15 July 2019.

WEBSITES

Army Training Network (ATN) <u>https://atn.army.mil/index.aspx</u> Central Army Registry (CAR) <u>https://atiam.train.army.mil/catalog/dashboard</u> Digital Training Management System (DTMS) <u>https://dtms.army.mil</u>

PRESCRIBED FORMS

This section contains no entries.

REFERENCED FORMS

Unless otherwise indicated, DA Forms are available on the Army Publishing Directorate (APD) website at https://armypubs.army.mil.

DA Form 2028, Recommended Changes to Publications and Blank Forms

This page intentionally left blank.

TC 3-09.8 30 March 2020

By Order of the Secretary of the Army:

JAMES C. MCCONVILLE

General, United States Army Chief of Staff

Official:

hlun S. Miller

Administrative Assistant to the Secretary of the Army 2008605

DISTRIBUTION: Distributed in electronic media only(EMO).

PIN:103230-000