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Fire Support and Field Artillery Certification and Qualification

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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 (ADRP 3-09). To do this, the Field Artillery 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 combat operations.

Training Circular (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 utilizing the Sustainable Readiness Model. 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 FA Gunnery 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.

This updated TC 3-09.8 is a revision based on multiple Critical Task Site Selection Boards for FA Military Occupational Skill, changes to the Table of Organization and Equipment, Headquarters Department of the Army Mission Essential Task List (METL), Sustainable Readiness Model and the DA requirements for unit training readiness assessment.

TC 3-09.8 is structured into a base document (Chapter 1) 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 Gunnery Strategy, an explanation of certification and qualification, the standards and conditions of the evaluations, applying the gunnery 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 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.

The tasks, conditions, and standards in this TC are based on system technical manuals, training products, joint agreements, and tasks in the military occupational specialty 13-series Soldier’s manuals. In all cases, use the most current technical manuals and Training Evaluation and Outline as references when executing the tables. All Field Artillery units are encouraged to provide ideas to improve the tasks, conditions, standards and performance steps and measures referenced in this circular.

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.
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Chapter 1

Introduction

This Training Circular (TC) provides the standards for implementing a Field Artillery (FA) gunnery program which incorporates all components of the FA system of systems within each FA formation at Battalion (BN) and below to include the Fire Support Teams and Cells 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, progressive, task oriented gunnery plan which certifies and qualifies our Teams, Crews, Cells, Sections, Platoons, Batteries, and Battalions to provide accurate fires to supported commanders. FA, as a system of systems, 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 progressive training from Military Occupational Specialty qualified individual tasks (Artillery Tables I) through collective gunnery training at the FA battalion level (Artillery Tables XVIII). The FA tables provide FA leaders and Soldiers with the “what” and “how” 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 and timely fires in support of the maneuver commander. If the requirements for 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 GUNNERY 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 gunnery programs to achieve and sustain unit readiness and proficiency in these tasks. The commander uses all the resources available to implement an efficient gunnery program; which maximizes the use of ammunition, training area availability, and Soldier training time to sustain proficiency. This TC provides an effective progressive method for certification and qualification procedures. The artillery tables within this TC provide the minimum standards for all components in the FA System, but do not limit commanders from adding to the standards. 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 GATED TRAINING STRATEGY

1-3. The Field Artillery Gated Training Strategy, figure 1-1 on page 1-3, identifies multiple gates and tables that must be achieved prior to progression to the next level. Gates include training, certification, qualification and requirements and external evaluations (EXEVALs).
   - Gate 1: Individual Skill Proficiency (Artillery Tables I)
   - Gate 2: Team and Crew Proficiency (Artillery Tables II-VI)
   - Gate 3: Initial Collective Training (Artillery Tables VII-XII)
   - Gate 4: Intermediate Combined Arms Collective Training (Artillery Tables XIII-XV)
   - Gate 5: Advanced Combined Arms Collective Training (Artillery Tables XVI-XVIII)
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 gunnery program and is available through the Army Publishing Directorate. The technical content of the FA Gunnery 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](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 collective training requirements for the training, certification, and qualification of the platoon, battery and battalion.
- Focus on FA gunnery procedures, in the construct of an Army wide FA standard gunnery training program, in a common tabular format which supports the TC 3-20.0, Integrated Weapons Training Strategy (IWTS) and AR 525-29, Sustainable Readiness Model.
- The tables provide crew/section/team qualification through collective training up to the battalion and Brigade Combat Team levels as required 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 Gunnery/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 progressive gunnery 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 gunnery strategy linked to required resources to assist the commander and training manager in the development of a large-scale combat operations focused gunnery 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 gunnery 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 GATED 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. 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. For example; personnel must be individually certified prior to conducting section training, certification (Dry Fire) and qualification (Live Fire). A crew/section/team must be qualified prior to progressing to higher level collective tables for the platoon, battery and battalion.

![Figure 1-2. Field Artillery Certification and Qualification](image-url)
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 Gunnery 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 FA Gunnery Strategy. They are responsible for establishing FA Gunnery and Safety Programs and Standard Operating Procedures in compliance with the standards of this TC as well as the planning, resourcing and approval of gunnery training, certification, and qualification events. The table below depicts the levels of authority for certifying and qualifying components of the FA System by echelon.

Table 1-1. Commanders’ Gunnery Authorities

<table>
<thead>
<tr>
<th>Echelon</th>
<th>Event</th>
<th>Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual</td>
<td>Certification</td>
<td>Battery Commander</td>
</tr>
<tr>
<td>Team/Cell/Crew/Section (AT V)</td>
<td>Certification</td>
<td>Battery Commander</td>
</tr>
<tr>
<td>Team/Cell/Crew/Section (AT VI)</td>
<td>Qualification</td>
<td>Battery Commander</td>
</tr>
<tr>
<td>Platoon (AT XI)</td>
<td>Certification</td>
<td>Battalion Commander</td>
</tr>
<tr>
<td>Platoon (AT XII)</td>
<td>Qualification</td>
<td>Battalion Commander</td>
</tr>
<tr>
<td>Battery (AT XIV)</td>
<td>Certification</td>
<td>BCT/FAB Commander (advised by DIVARTY Commander)</td>
</tr>
<tr>
<td>Battery (AT XV)</td>
<td>Qualification</td>
<td>BCT/FAB Commander (advised by DIVARTY Commander)</td>
</tr>
<tr>
<td>Battalion (AT XVII)</td>
<td>Certification</td>
<td>Division / Corps Commander</td>
</tr>
<tr>
<td>Battalion (AT XVIII)</td>
<td>Qualification</td>
<td>Division / Corps Commander</td>
</tr>
<tr>
<td>BCT – Brigade Combat Team</td>
<td>FAB – Field Artillery Brigade</td>
<td>DIVARTY – Division Artillery</td>
</tr>
</tbody>
</table>

RESPONSIBILITIES OF THE MASTER GUNNER

1-8. The Master Gunner is the primary advisor and manager of the commander’s gunnery 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 gunnery, 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 gunnery training.

- 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 gunnery simulations training.
- Provides quality control supervision of all gunnery training 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.

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 a semi-annually requirement at all echelons but can increase in frequency as necessary in order to meet unit readiness requirements. 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 preformed based on assigned position and not the individual’s rank/grade. For example, a Specialist (SPC) assigned in a Sergeant’s position is required to train and certify on the artillery skills proficiency test tasks assigned to the 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.

QUALIFICATION

1-11. Qualifications are evaluated live fire events conducted at various echelons in ATs VI, XII, XV and XVIII. The ATs for Qualification are conducted semi-annually for the Active Component and annually for the Army National Guard, but can be increased in frequency as necessary in order to meet unit Training Readiness requirements. Qualification is valid for 6 months from date of qualification for the active component and 12 months for the Army National Guard. 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.

<table>
<thead>
<tr>
<th>Written Test + ASPT (Position Specific Individual Tasks)</th>
<th>AT I Certified Individual</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT I Certification + AT V + AT VI = Qualified Crew</td>
<td></td>
</tr>
<tr>
<td>Qualified Crews + AT VII thru AT XI + AT XII = Qualified Platoon</td>
<td></td>
</tr>
<tr>
<td>Qualified Platoons + AT XIV + AT XV = Qualified Battery</td>
<td></td>
</tr>
<tr>
<td>Qualified Batteries + AT XVII + AT XVIII = Qualified Battalion</td>
<td></td>
</tr>
</tbody>
</table>

Figure 1-3. Qualification Program of FA Delivery Formations
1-12. Table 1-2 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 exceeding six months since last Table VI qualification. 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 1-3 on page 1-8, lists the disqualification criteria beyond Artillery Tables VI.

### Table 1-2. Section/Team Qualification Criteria

<table>
<thead>
<tr>
<th>Element</th>
<th>Critical Personnel</th>
<th>Qualification Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Howitzer, M119</td>
<td>COS, Gunner</td>
<td>Artillery Table (AT) VI (Live-Fire) in the last 6 months.</td>
</tr>
<tr>
<td>Howitzer, M109</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Howitzer, M777</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Launchers, M270/M142</td>
<td>COS, Gunner</td>
<td></td>
</tr>
<tr>
<td>FDC/BOC/POC</td>
<td>FDO, Fire Control SGT, Fire Direction Computer</td>
<td></td>
</tr>
<tr>
<td>Dismounted FIST</td>
<td>FSNCO</td>
<td></td>
</tr>
<tr>
<td>Bradley FIST</td>
<td>FSO, FSNCO, Driver</td>
<td>Main Gun Platform Gunnery Table VI and Artillery Table (AT) VI in the last 6 months.</td>
</tr>
<tr>
<td>Radar Section (Q36)</td>
<td>Section Chief, Senior FF Radar Operator</td>
<td>Artillery Table (AT) VI (Live-Fire) in the last 6 months.</td>
</tr>
<tr>
<td>Radar Section (Q37)</td>
<td>Section Chief, Senior FF Radar Operator</td>
<td></td>
</tr>
<tr>
<td>Radar Section (Q53)</td>
<td>Section Chief, Senior FF Radar Operator</td>
<td></td>
</tr>
<tr>
<td>Radar Section (Q50)</td>
<td>Section Chief, Senior LCMR Operator</td>
<td>Artillery Table (AT) VI (Live-Fire) in the last 6 months.</td>
</tr>
<tr>
<td>Survey TBD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATC ammunition team chief</td>
<td>FDC fire direction center LCMR</td>
<td>light counterfire mortar radar non-commissioned officer</td>
</tr>
<tr>
<td>AT artillery table</td>
<td>FDO fire direction officer NCO</td>
<td></td>
</tr>
<tr>
<td>AG assistance gunner (AG)</td>
<td>FF fire finder PADS</td>
<td>position and azimuth determining system</td>
</tr>
<tr>
<td>BOC battery operation chief</td>
<td>FIST fire support team</td>
<td></td>
</tr>
<tr>
<td>COS chief f section</td>
<td>FS fire support SGT Sergeant</td>
<td></td>
</tr>
</tbody>
</table>
Table 1-3. Disqualification Criteria of Units and FS Elements

<table>
<thead>
<tr>
<th>Echelon</th>
<th>Element</th>
<th>Critical Personnel</th>
<th>Loss of Critical Personnel</th>
<th>Qualification Expiration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Platoon</td>
<td>Firing Platoon</td>
<td>PL, PSG, GNY SGT</td>
<td>Loss of two or more critical personnel or loss of 2 or more Section Chiefs (to include FDC) since last AT XII qualification.</td>
<td>&gt; 6 Months AC 1 Year RC</td>
</tr>
<tr>
<td>Company</td>
<td>Company FIST</td>
<td>Company FSO, FSNCO</td>
<td>Loss of both critical personnel since last AT XII qualification.</td>
<td>&gt; 6 Months AC 1 Year RC</td>
</tr>
<tr>
<td>Battery</td>
<td>Firing Battery</td>
<td>Battery CDR, 1SG, XO/OPS OFF, OPS NCO</td>
<td>Loss of two or more critical personnel or loss of 2 or more PLs or PSGs since last AT XV qualification.</td>
<td>&gt; 6 Months AC 1 Year RC</td>
</tr>
<tr>
<td>Battalion</td>
<td>BN Fires Cell</td>
<td>BN FSO, FSNCO</td>
<td>Loss of at least two critical personnel since last AT XVIII qualification.</td>
<td>&gt; 6 Months AC 1 Year RC</td>
</tr>
<tr>
<td>Counterfire Cell</td>
<td>Counterfire Officer, FA Targeting NCO</td>
<td>Loss of one or more critical personnel or the loss of more than 50% of Target Processing Specialist</td>
<td>&gt; 6 Months AC 1 Year RC</td>
<td></td>
</tr>
<tr>
<td>Battalion</td>
<td>FA Battalion</td>
<td>BN CDR, CSM, XO, S3, OPS NCO, FDO, FDNCO</td>
<td>Loss of three or more critical personnel or loss of four or more critical personnel at the battery level since last AT XVIII qualification.</td>
<td>&gt; 6 Months AC 1 Year RC</td>
</tr>
<tr>
<td>Brigade</td>
<td>BCT Fires Cell</td>
<td>FSCOORD (BN CDR), BDE FSO, TGT Officer, FSNCO</td>
<td>Loss of two or more critical personnel since last AT XVIII qualification.</td>
<td>&gt; 6 Months AC 1 Year RC</td>
</tr>
</tbody>
</table>

AC active component  BCT brigade combat team  BN battalion
CDR commander CSM Command Sergeant Maj  FA field artillery
FDC fire direction center FDO fire direction officer  FDNCO fire direction Non-Commissioned Officer
FIST fire support team FSCOORD fire support coordinator  FSO fire support officer
FSNCO fire support GNY SGT Gunnery Sergeant  NCO Non-Commissioned Officer
Non-Commissioned Officer OPS OFF Operations Officer  OPS NCO Operations Non-Commissioned Officer
PL Platoon Leader  PSG Platoon Sergeant  TGT target
XO Executive Officer

SECTION III – EVALUATION, CONDITIONS AND STANDARDS

1-13. 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 supports the linkage from training to assessing and reporting training readiness.

EVALUATION

1-14. Evaluations can be internal or external. Internal evaluations are conducted at all levels, and they must be a routine component of all training. External evaluations are usually more formal and are normally conducted by a headquarters two echelons above the unit being evaluated. Evaluations can be informal, formal, internal, external or any combination thereof (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-T 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.

1-15. 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 Field Artillery. Evaluation of the unit’s technical ability is different than a fully resourced EXEVAL. An EXEVAL is not necessary conducted in conjunction with a Live Fire event. External Evaluation 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 organization's ability to survive on the battlefield.

1-16. 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 and should be used for all Qualification Evaluations (Artillery Tables VI, XII, XV, and XVIII). All units in the Army undergo an EXEVAL to validate task proficiency ratings.

1-17. 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 company-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 OC/Ts for AT XII, XV and XVIII. The senior OC/T 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

1-18. FA units should train to fight large scale combat operations 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 Gunnery program must include the performance of technical FA tasks in various conditions to best prepare for large scale combat operations. To do so, a gunnery program should follow FA Training Strategy’s guidance. To follow this guidance, a unit’s FA gunnery program should perform its tasks using its full operational capability, digital systems in a degraded capacity, and with fully degraded backup methods.

1-19. In large-scale combat operations, FA units will likely experience conditions that are not normal and must continue to provide fire support in support of the maneuver commander. 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.

1-20. A degraded environment dictates the use of manual tools, near precision ammunition and substituted procedures when equipment is not functioning properly.
1-21. 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 TLE for precision capabilities is < 6 meters. The TLE 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, Fires Cells 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 binoculars and maps for target identification without requiring a precision ammunition.

PROGRESSION OF COMPLEXITY

1-22. A unit’s FA Gunery plan will progressively increase in complexity as the unit successfully completes each gate 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 below.

![Figure 1-5. Process to evaluate, assess and report Training Readiness](image-url)
SECTION IV – UNIT GUNNERY TRAINING PLANS

1-23. The artillery tables were developed and identify the progression in 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

1-24. A unit’s gunnery 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 in gunnery. The Master Gunner should advise the commander and assess, plan, develop, implement, instruct, evaluate, and reassess all phases of gunnery training. The commander’s ongoing assessment is crucial to gunnery program development.

1-25. 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, 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 GATED TRAINING STRATEGY

1-26. FA Commanders and their staffs are responsible for the implementation of the FA Gunnery Strategy into their unit training plans. The strategy is designed to be implemented in a progressing of Artillery Tables and Gates from individual through battalion. All elements of the FA System should generally follow the Artillery Table progression simultaneously 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 will not wait until the rest of the battalion’s scheduled Artillery Tables VI, but should plan and resource the training to ensure the radar section is recertified and then able to participate in the higher level collective training.

1-27. The Artillery Table Gunnery Cross-Walk is a graphical depiction of all components of the FA System within an FA Battalion. As depicted in the figure 1-6 on page 1-12, it is designed to visually assist the commanders and their staffs in the communication of the FA Gunnery Strategy and to better understand the linkages between each component in the FA System. The matrix is common to both Active and Reserve FA units. The vertical columns in the cross-walk represent Chapters 3-12 and highlight the progression of artillery tables for each component in the FA System. The horizontal rows represent each of the Artillery
Tables and they progressively increase in complexity from top to bottom. Also horizontally, the different shades depict the gates (1-5) depicted in the FA Training Strategy. It also links the Artillery Tables (as prerequisites) to participation in maneuver live fire events identified in the TC 3-20.0, Integrated Weapons Training Strategy. On the right side of the cross-walk there is a column which depicts the FA Gunnery Strategy’s entry points to the IWTS. Appendix C contains gunnery cross-walks for all FA Battalions.

### Table 1-4

<table>
<thead>
<tr>
<th>FA Training gate</th>
<th>Fire Direction Centers</th>
<th>Paladin Firing Platform</th>
<th>Delivery Unit</th>
<th>UAICM</th>
<th>Survey</th>
<th>Fire Support</th>
<th>Counterfire</th>
<th>Maneuver Training Event</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gate 2 - TAS and Crew Proficiency</td>
<td>AT V - Section Certification</td>
<td>AT V - Section Certification</td>
<td>AT V - Section Certification</td>
<td>AT V - Section Certification</td>
<td>AT V - Section Certification</td>
<td>AT V - Section Certification</td>
<td>AT V - Section Certification</td>
<td>AT V - Section Certification</td>
<td>AT V - Section Certification</td>
</tr>
<tr>
<td>Gate 4 - Intermediate Combined Arms Collective Training</td>
<td>AT XV battery qualification</td>
<td>AT XV battery qualification</td>
<td>AT XV battery qualification</td>
<td>AT XV battery qualification</td>
<td>AT XV battery qualification</td>
<td>AT XV battery qualification</td>
<td>AT XV battery qualification</td>
<td>AT XV battery qualification</td>
<td>AT XV battery qualification</td>
</tr>
<tr>
<td>Gate 5 - Advanced Combined Arms Collective Training</td>
<td>AT XVII - Battalion Certification</td>
<td>AT XVII - Battalion Certification</td>
<td>AT XVII - Battalion Certification</td>
<td>AT XVII - Battalion Certification</td>
<td>AT XVII - Battalion Certification</td>
<td>AT XVII - Battalion Certification</td>
<td>AT XVII - Battalion Certification</td>
<td>AT XVII - Battalion Certification</td>
<td>AT XVII - Battalion Certification</td>
</tr>
</tbody>
</table>

### Figure 1-6. FA BN (ABCT) Gated Training Strategy

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

1-28. FA Battalions that provide Direct Support Fires to brigade combat teams must integrate their fires into maneuver collective live fire training events. Similar to the FA Gunnery Strategy, brigade combat teams follow a progressive 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 gated and 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 Objective Training Assessment. Table 1-4 on page 1-13, graphically depicts the IWTS from team to battalion.
### Table 1-4. Overview of the Integrated Weapons Training Strategy

<table>
<thead>
<tr>
<th>Echelon</th>
<th>Table I</th>
<th>Table II</th>
<th>Table III</th>
<th>Table IV</th>
<th>Table V</th>
<th>Table VI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PREREQ</td>
<td>PREREQ</td>
<td>PREREQ</td>
<td>Collective Task Proficiency</td>
<td>COORD / Rehearsal / Practice</td>
<td>Live-Fire Proficiency Gate</td>
</tr>
<tr>
<td>CRAWL</td>
<td>CRAWL</td>
<td>WALK</td>
<td>RUN</td>
<td>RUN</td>
<td>RUN</td>
<td>RUN</td>
</tr>
</tbody>
</table>

| Battalion        | TEWT    | STAFFEX  | CPX       | FTX      | FCX     | CALFEX   |
|                  | Live    | Blended  | Live      | TADSS    | Blended | Live-Fire |
|                  |         |          |           |         |         |          |
| Company          | TEWT    | STX-V    | STX       | FTX      | FCX     | CALFEX   |
|                  | Live    | Virtual  | TADSS     | TADSS    | Live-Fire | Live-Fire |
|                  |         |          |           |         |         |          |
| Platoon          |         |          |           |         |         |          |
| Section          | CLASS   | STX-V    | STX       | FTX      | FCX     | LFX      |
|                  | SOP     | Virtual  | TADSS     | TADSS    | Live-Fire | Live-Fire |
|                  | Live    |          |           |         |         |          |
| Squad            |         |          |           |         |         |          |
| Mortar Formation | GST     | STX-V    | STX       | FTX      | Practice| Qualification |
|                  | Live    | Virtual  | TADSS     | TADSS    | Live-Fire | Live-Fire |
| Crew Platform    |         |          |           |         |         |          |
| Special Purpose Weapons | PMI&E | PLFS    | Drills    | Basic    | Practice| Qualification |
|                  | Live    | Virtual  | TADSS     | Live-Fire | Live-Fire | Live-Fire |
| Crew-Served Weapons |       |         |           |         |         |          |
| Individual Weapons |       |         |           |         |         |          |

1-29. 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 Field Artillery 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 1-5 on page 1-14, lists the minimum level of support to each IWTS live-fire event listed in TC 3-20.0 and the prerequisites required.
Table 1-5. Firing Unit and Fire Cell Support to IWTS Live-Fire Events

<table>
<thead>
<tr>
<th>IWTS Event</th>
<th>FA Elements (highest echelon)</th>
<th>Pre-Requisite</th>
<th>Missions per Iteration</th>
</tr>
</thead>
</table>
| CO (FCX), Table V | Cannon Firing Platoon, CO FIST, Platoon FO                | Cannon Artillery Table XII (PLT Qualification) and Fire Support XI (PLT FO Certification) | 1x Deliberate TGT (HE)  
1x Dynamic TGT (HE)  
1x Immediate Smoke (Day)  
1x Illumination (Night) |
| CO (CALFEX), Table VI | Cannon Firing Platoon, CO FIST, Platoon FO              | Cannon Artillery Table XII (PLT Qualification) and Fire Support XI (PLT FO Certification) | 1x Deliberate TGT (HE)  
1x Dynamic TGT (HE)  
1x Immediate Smoke (Day)  
1x Illumination (Night) |
| BN (FCX), Table V | Cannon Firing Battery, Battalion FSE, CO FIST, Platoon FO | Cannon Artillery Table XV and Fire Support Table XIV                          | 1x HE Fire Plan (3 TGTs)  
1x Quick Smoke (Day)  
1x IR Illumination (Night) |
| BN (CALFEX), Table VI | Cannon Firing Battery, Battalion FSE, CO FIST, Platoon FO | Cannon Artillery Table XV and Fire Support Table XIV                          | 1x HE Fire Plan (3 TGTs)  
1x Quick Smoke (Day)  
1x IR Illumination (Night) |

BN  =  battalion  
CALFEX  =  combined arms live-fire exercise  
CO  =  company  
FO  =  forward observer  
FCX  =  fire coordination exercise  
FIST  =  fire support team  
FSE  =  fire support element  
HE  =  high explosive  
IR  =  Infrared  
IWTS  =  integrated weapon training system  
PLT  =  platoon  
TGT  =  target

SECTION V – UNIT TRAINING READINESS ASSESSMENT

COLLECTIVE TRAINING PROFICIENCY

1-30. 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.

COMPONENTS OF TRAINING READINESS ASSESSMENT

1-31. There are four components to a Training Readiness Assessment that all operational commanders must use in their objective assessment. This TC and the FA Gunnery Strategy directly affect Training Readiness Assessments for FA Battalions and Batteries. This highlights the relationship between the FA Gunnery Strategy and a units Training Readiness Assessment. Figure 1-7 on page 1-15, reflects the four components of the assessment; Weapon Systems Proficiency individual, crew served, and platform qualification, Mission-Essential Task Proficiency, Collective Live-Fire Task Proficiency, and continuous Training Days.
INDIVIDUAL, CREW SERVED AND PLATFORM PROFICIENCY

1-32. In this component of the assessment, batteries and battalions report their individuals’ proficiency with assigned weapons and the proficiency of its crews on Department of the Army recognized platforms. Howitzers and Launchers in all FA Firing Batteries are Department of the Army recognized platforms. In order for a crew to be considered proficient on the howitzer and launcher platforms, they must have successfully completed Gate 2 of the FA Training Strategy, which is an Artillery Table VI Qualification. The standards for meeting Artillery Tables VI howitzer and launcher crew qualifications are found in Chapters 3 and 4. Commanders should note that other FA System Teams, Crews, or Sections are not DA recognized platforms and will not be considered in this component of the Training Readiness Assessment (i.e., Radars, Fire Direction Centers, Fires Cells, etc.).

MISSION ESSENTIAL TASK PROFICIENCY

1-33. 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 gunnery 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.

1-34. 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 Gunnery 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

1-35. 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 Gates 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 1-8 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

![Figure 1-8. Example Collective Live-Fire Gate Matrix](image)

1-36. As described in FM 7-0, live-fire tasks receive an EXEVAL in accordance with the task’s training and
evaluation outlines standards. The commander two levels up that directs the live-fire training event selects
the collective live-fire task(s) and determines how the operational environment is incorporated into the live-
fire’s range scenario and the exercise operation order for the live-fire training event.

TRAINING DAYS TO ACHIEVE T1

1-37. Training (T)-Days is the Commander’s estimate of the minimum number of continuous training days,
unconstrained by resources, required to achieve T1. T-Days is derived from the approved unit training plan
and refined through commanders’ dialogues. The decertification and qualification of any section/crew/teams,
platoons, batteries or battalions will impact the amount of training days required for a unit to achieve a
readiness level of T1. This includes teams/crews/sections not recognized as platforms in the individual, crew
served, and platform component of the Training Readiness Assessment. The Commander must closely
monitor and consider the certification and qualification requirements for all elements in his FA System. Table
1-6 on page 1-17, associates the T-Level of the unit to the amount of days the commander estimates it will
take to achieve T1.
<table>
<thead>
<tr>
<th>T-Level</th>
<th>Mission Essential Task (MET) Proficiency</th>
<th>Weapon Systems (I/CS/P Qualification) Proficiency</th>
<th>Collective Live-Fires Task Proficiency</th>
<th>Training Days to Achieve T1</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>≥ 85% (No U)</td>
<td>≥ 90% Qualified</td>
<td>Unit Live-Fire conducted at appropriate echelon as determined by Live-Fire Gates</td>
<td>≤ 10 days</td>
</tr>
<tr>
<td>T2</td>
<td>≥ 70% to &lt; 85% (No U)</td>
<td>≥ 80% to &lt; 90%</td>
<td>≤ 35 days</td>
<td></td>
</tr>
<tr>
<td>T3</td>
<td>≥ 55% to &lt; 70%</td>
<td>≥ 70% to &lt; 80%</td>
<td>≤ 90 days</td>
<td></td>
</tr>
<tr>
<td>T4</td>
<td>&lt; 55%</td>
<td>&lt; 70%</td>
<td>Not Live-Fire Proficiency≤</td>
<td>&gt; 90 days</td>
</tr>
</tbody>
</table>
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 (AKO), Defense Knowledge Online (DKO) and the Fires Knowledge Network (FKN) communities. Access to milBook requires appropriate online credentials or a registered common access card (CAC). The paragraphs in this chapter summarize the content of chapters 1 through 12 and appendices A through H of the Fire Support and Field Artillery Certification and Qualification manual, TC3-09.8, (draft format not approved for implementation.)

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 gunnery program and is available through the Army Publishing Directorate. The technical content of the FA Gunnery 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 Army Regulation (AR) 380-5. The TC3-09.8 on the FCoe portal is in “draft” form and is “not authorized for implementation.” 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: https://www.milsuite.mil/book/groups/tc-3-098-field-artillery-gunnery, 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, M109A7, M119A2/A3 and the M777A2 howitzer systems.
2-5. Chapter 4: Multiple Launch Rocket System (MLRS)-High Mobility Artillery Rocket System (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/High Mobility Artillery Rocket System fire missions, ammunition resupply and displacement of the M270A1 and M142 launcher systems.

2-6. Chapter 5: Fire Direction Center (FDC) - This chapter provides a methodology for training and evaluating individuals and crews/sections on the task required to initialize and prepare of 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 Fire Direction Center, Battery Operations Center and the Platoon Operations Centers 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 Fires Cells. Certification focuses on target accurate 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 phased approach to training and certification as identified by the FA Commandant and endorsed by the Joint Fires Observer Executive Steering Committee.

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: Radar - 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.

2-10. Chapter 9: 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 - 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 - 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 - This chapter provides 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 XVII 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: Minimum Quadrant and Elevation Rapid Fire Tables** - This appendix provides leaders with the Minimum Quadrant and Elevation Rapid Fire Tables for cannon systems, propellants and fuses.

2-16. **Appendix C: Field Artillery Gated Training Strategy** - This appendix provides examples for all FA Battalions to plan, execute and assess the FA Gated 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 gunnery training.

2-17. **Appendix D: Time and Accuracy** - 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 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 the 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.
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# Glossary

## SECTION I – ACRONYMS AND ABBREVIATIONS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABCT</td>
<td>armored brigade combat team</td>
</tr>
<tr>
<td>ADP</td>
<td>Army doctrine publication</td>
</tr>
<tr>
<td>ADRP</td>
<td>Army doctrine reference publication</td>
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References

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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, November 2018.

RELATED PUBLICATIONS
These documents contain relevant supplemental information.

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ATP 3-09.23, Field Artillery Cannon Battalion, 24 September 2015.
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Central Army Registry (CAR) https://atiam.train.army.mil/catalog/dashboard
Digital Training Management System (DTMS) https://dtms.army.mil
Field Artillery Training and Doctrine, Fires Knowledge Network (AKO) Site https://www.us.army.mil/suite/page/586282

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