DEPARTMENT OF THE AIR FORCE
DCS/Logistics, Engineering & Force Protection
Directorate of Civil Engineers

CFETP 0802,0809,0817

Parts I and II
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Job Series 0802, 0809, 0817

# ENGINEERING TECHNICIAN/CONSTRUCTION CONTROL INSPECTOR/SURVEY TECHNICIAN

# CFETP

## CAREER FIELD EDUCATION AND TRAINING PLAN

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# Preface

**Welcome to the CFETP for Department of the Air Force Engineering Technical, Construction Control, and Survey Technical Career Series**

This Career Field Education and Training Plan (CFETP) identifies and describes recommended training, education, professional development, and experience to empower the Department of the Air Force (DAF) Engineering Technical (0802) Construction Control (0809) and Survey Technical (0817) personnel. DAF includes both the Air Force and Space Force. This CFETP was developed in accordance with the requirements of DAFI 36-2670, *Total Force Development* (here).

This CFETP guides the Engineering Technical, Construction Control, and Survey Technical members to become successful in their position and help prepare them to reach their career goals. Engineering Technical, Construction Control, and Survey Technical may ascend to a Activity Management Plan Manager, Construction Manager, or Section Chief leadership level within the Civil Engineer organization. This CFETP intends to serve as a career roadmap for Engineering Technical, Construction Control, and Survey Technical personnel whether they are new to a base-level position or those with broad experiences at the intermediate and senior levels.

Serving in an Engineering Technical, Construction Control, and Survey Technical series are an exciting, challenging, and rewarding career path. DAF Installations operate as small cities, and base-level **Engineering Technician (0802)** personnel play a vital role by interpreting rough engineering sketches to produce working drawings using CAD/BIM techniques; Constructing architectural, structural, civil, mechanical, and electrical drawings; Performing updates to Base Comprehensive Plans and Engineering record drawings; Supporting drawing outputs and reproduction; Preparing cost estimates, performance work statements, and specifications for existing and proposed facilities sustainment, restoration, and maintenance; Conducting simple load calculations for horizontal and vertical construction; Providing design, review, construction liaison between associated agencies; Conducting reconnaissance, site location, construction, and mapping surveys; Utilizing auto-levels, electronic total stations, mapping and survey-grade GPS equipment, and related instruments; Collecting, converting, and presenting field survey data for civil engineering projects; Producing installation maps; Creating and maintaining engineering spatial, tabular, and metadata information to national standards; Ensuring optimal resource decisions are made and executed across civil engineer activities; Utilizing proactive data and information from Civil Engineer Business Systems and Sustainment Management Systems to conduct performance analysis, risk-based sustainment decision making, resource optimization, and life-cycle requirements planning; Queries and analyzes geospatial data for end-user applications.

A **Construction Control Inspector (0809)** position manages and inspects construction and maintenance contracts; Interprets plans, specifications, and associated contract documents; Coordinates, evaluates, monitors, and documents contract activities and progress; Prepares recommendations for contract modifications; Reviews material submittals and evaluates procedures for compliance with contract specifications; Conducts pre-final, acceptance, and post-acceptance inspections; Performs standardized and expedient tests on soils, asphalt, and

concrete; Collects, records, and interprets test data; Prepares reports for engineering evaluation; Prepares cost estimates, performance work statements, and specifications for existing and proposed facilities; Performs/understands simple load calculations for horizontal and vertical construction; Acts as liaison between design, review, construction, and Agency;

A **Survey Technician (0817)** conducts reconnaissance, site location, construction, and mapping surveys; Completes surveys using auto-levels, electronic total stations, mapping and survey-grade GPS equipment, and related instruments; Collects, converts, and presents field survey data for civil engineering projects.

A primary goal in the Air Force Civil Engineer Annex for Agile, Innovative, and Ready Airmen Engineers is the need to recruit, develop, and retain individuals for our Airmen Engineer team. Engineering Technical, Construction Control, and Survey Technical personnel are critical players in shaping the CE enterprise end-state goal of Right-Sized, Resilient Installations. As explained in the Air Force Infrastructure Investment Strategy (I2S), our installation leaders must ensure our infrastructure requirements and investments are consistent with the current version of the National Defense Strategy.

This CFETP provides detailed information for the knowledge, skills, and abilities that Engineering Technical, Construction Control, and Survey Technical personnel require to be successful in their careers. It includes specific career field progression information, duties, responsibilities, and training strategies relevant to the 0802, 0809, and 0817 career fields.

# Part I – Career Field Information

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## 1.1 Section A: Introduction to the CFETP

### 1.1.1 Purpose of the CFETP

The DCS/Logistics, Engineering & Force Protection's Directorate of Civil Engineers (AF/A4C), the Assistant Secretary of the Air Force for Installations, Environment and Energy (SAF/IEE), and our enterprise leaders throughout the Total Force are all committed to ensuring that our Engineering Technical, Construction Control, and Survey Technical personnel have the depth, breadth, knowledge, and capabilities they need to successfully serve our CE Enterprise and our Air and Space Forces.

This CFETP serves as the core education and training requirements document for the Engineer Technical, Construction Control, and Survey Technical career series used by Air Force Career Field Manager's, Major Command (MAJCOM) Functional Managers, Commanders, Education and Training Managers, supervisors/trainers, and certifiers to plan, develop, manage, and conduct an effective career field training program. It serves as a road map for career progression and outlines requirements that should be satisfied at appropriate points throughout the career path.

This CFETP has several purposes:

Serves as a management tool to plan, manage, conduct, and evaluate a career field training program. It is used to help supervisors identify training at the appropriate point in an individual's career.

Identifies competency and proficiency level in a specialty and recommends education/training throughout each phase of an individual's career.

Lists training courses available in a specialty and identifies sources of training and the delivery methods.

Identifies major resource constraints that impact full implementation of the desired career field training process.

Outlines professional training, education, and leadership/mentorship opportunities; and information about how to successfully engage within the DAF, DoD, other Federal Agencies, and local off-base communities.

### 1.1.2 CFETP Format

The CE Functional Advisory Council (FAC) developed critical elements crucial to progression within the CE enterprise: depth and breadth of experience, professional education and training, individual credentialing, and professional certification. In addition, these credentials play a role in individual career management and competitiveness for select jobs and training opportunities. This document is formatted with these elements in mind. There are two parts: Part I focuses on career field competencies, education, experience, skills, and training required to help meet career goals as an Engineering Technical/Construction Control/Survey Technical member. Part II provides detailed information on training opportunities and mentorship.

**Part 1 Career Field Information:** Informs management of the Engineering Technical, Construction Control, and Survey Technical career series requirements.

Section A explains how to use this plan.
Section B identifies career field progression information, duties, responsibilities, and training strategies.
Section C describes recommended competencies related to an installation support role, the Deputy Base Civil Engineer's organizational leadership role, and how to support successful community engagement.
Section D indicates resource constraints.

**Part 2 Training Standards:** Provides relevant training information for Engineer Technical, Construction Control, and Survey Technical career standards.

Section A details professional training and education requirements.
Section B includes information on leadership and mentorship.

**Appendices**: Relevant key abbreviations and terms are in **Appendix A**. **Appendix B** provides a list of competencies. **Appendix C** provides an example of an Individual Development Plan (IDP). **Appendix D** provides an index of training courses and resources.

## 1.2 Section B: Career Progression Information, Duties and Responsibilities, Training Strategies, and Career Path Information

### 1.2.1 Career Progression Information

Career progression can vary substantially for each career field due to various factors, including personal goals, availability of positions across the Air Force, geographic mobility, professional certification, training, and continuing education. Within the first five to ten years, career goals should start to solidify and align with serving in an enterprise leader or functional expert/leader role.

The DAF describes these two paths as: The functional expert/leader track is designed to provide development for those who aspire to be steeped in their functional expertise and provide continuity for the workforce. This track emphasizes technical expertise, institutional memory, and functional breadth within one's technical field. The enterprise track emphasizes depth and breadth of experience within and outside one's functional field, to include cross-functional and Joint assignments. The enterprise track values geographical or organization mobility and professional military education. The enterprise track is designed to provide a broad base of development for those who aspire to enterprise leader (e.g., Senior Executive Service track) positions. The enterprise track emphasizes depth and breadth of experience within and outside one's functional field, to include cross-functional and Joint assignments.

For example, a goal to become an enterprise leader will drive career and education decisions differently than a goal to be a functional expert/leader in a specific discipline or program. The CFETP intends to focus the traditional Engineering Technical /Construction Control /Surveying Technical personnel on their current role and actions to achieve their career aspirations. In some cases, Engineering Technical /Construction Control /Surveying Technical personnel may not be geographically mobile, as they enjoy their work at the installation level and may not want to relocate to other installations. In this case, the CFETP can still assist with career development, as leadership and critical advisory opportunities exist at the base level. The goal of the CFETP is to support the CE Human Capital Roadmap lines of effort to envision the force and to recruit/retain Engineering Technical, Construction Control, and Survey Technical positions to meet the mission requirements across the full spectrum of the CE enterprise.

There is no single, optimal career path to ensure career success. A successful career path includes steady growth in job responsibility and professional development with a wide variety of experience. Periodically, individuals should reassess career path goals and consider personal strengths, weaknesses, training or experience gaps, commitment to the organization's mission, short and long-term goals. They should also consider the organization's needs, training resources, position availability, and promotion opportunities. How well an Engineering Technical/ Construction Control/ Surveying Technical employee performs in their current position is essential in determining future success.

### 1.2.2 DAF Enterprise Career Building Blocks

The Engineering Technical /Construction Control /Surveying Technical workforce's structure Career Building Blocks (CBBs) describe the broad base of installation-level experiences up to a leadership role. The DAF CBBs (Figure 1) show appropriate positions for various stages of the Engineering Technical /Construction Control /Surveying Technical career available at each level of the CE enterprise: base, intermediate, and headquarters. The CBB recommends opportunities from non-supervisory to supervisory positions within each development level. Progression through these three levels allows Engineering Technical /Construction Control /Surveying Technical personnel to obtain the depth and breadth of experience required to lead at the higher levels of the CE enterprise. However, engineering professionals should refrain from assuming quick advancement between GS levels within the three levels of the CE enterprise as the norm. A fledgling career focuses on depth and breadth of experience through multiple positions within an installation and intermediate level of the CE enterprise; mobility across installations and the Air Force broadens experiences outlined on the CBB and leads to expanded opportunities. Engineering Technical /Construction Control /Surveying Technical personnel typically gain initial experience at the base level. They may formalize long-range goals or what track to follow once they reach the intermediate level of their career. The structure of the Engineering Technical/ Construction Control/ Surveying Technical workforce is described as a CBB seen below in **Figure 1**.

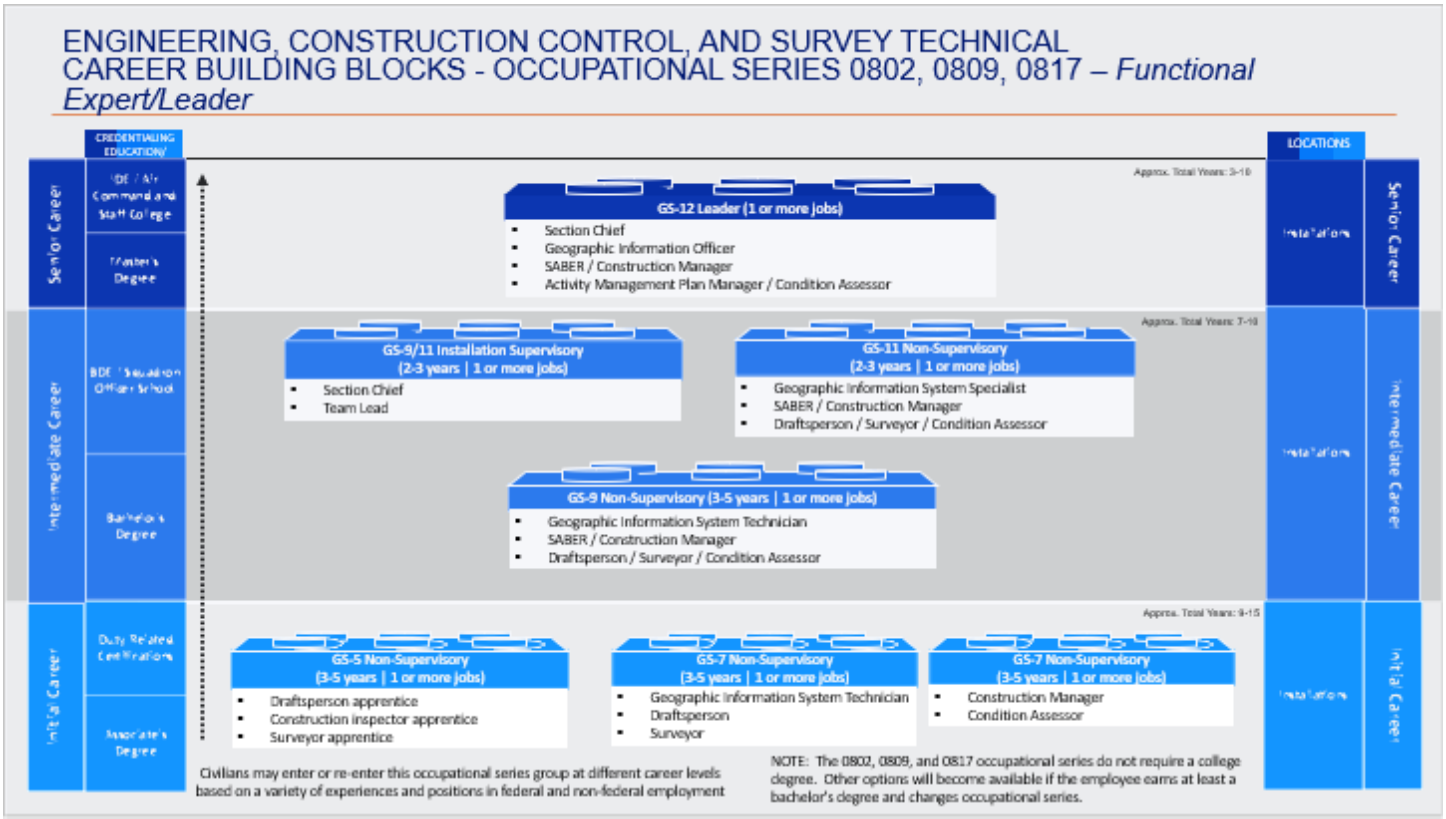


*Figure 1: Department of the Air Force Engineering Technician/ Construction Control/ Surveying Technical Career Building Blocks*

**Initial Level**. GS5 - GS7 are initial-level installation positions, with training and education orientated towards meeting basic requirements of the Engineering Technical/ Construction Control/ Surveying Technical occupational series. Concentration on technical skills and

effective writing and speaking aptitudes are essential outcomes at this level. Each series has a set of core tasks and knowledge required to be successful in the career field. The core tasked are listed in **Appendix D**.

**Intermediate Career.** The Engineering Technical/ Construction Control/ Surveying Technical GS-09 and GS-11 personnel must be competent in managing resources and directing civil engineering design, drafting, surveying, contract surveillance, and facility construction and maintenance programs. Achievement of professional certifications, Civilian Development Education, and advanced education prepare the employee to transition into leadership or more complex technical positions at an installation, AFCEC, AFIMSC, or MAJCOM. General activities include the management, inspection, and evaluation of work center activities; Plans and organizes all Engineering Airmen's activities, efforts, and proficiencies; Coordinates with other civil engineering and base activities; Performs supervisory functions in assigned sections. Ensures compliance with commercial and military guidance and policy and reviews acquisition, equipment, and requisitions; Discusses inspection findings and recommend corrective actions; Solves complex problems by studying engineering drawings and analyzing construction and operating characteristics; Develops and establishes operation and maintenance procedures to ensure maximum efficiency.

**Senior Career.** GS-12 Engineering Technical/ Construction Control/ Surveying Technical Leaders represent the DAF in managing engineering resources and human capital engaged in the installation's strategic objectives, plans, and programs that may involve multiple agencies and community relationships. Training and education at this level focus on further developing staff-level skills in support of installation engineering programs and human capital; and developing executive and managerial abilities. Management of the Engineering Technical/ Construction Control/ Surveying Technical Leader's career at the installation level will provide the broad experience necessary to compete for positions at the intermediate and headquarters levels and make individuals more competitive for leadership positions of increasing responsibility later in their career. A career path could consider moving to positions at different levels of the CE enterprise and between service components. Experiencing a wide variety of leadership and non-leadership positions best prepares potential candidates to hold an AFCEC, AFIMSC, MAJCOM, or senior leadership position across the CE enterprise.

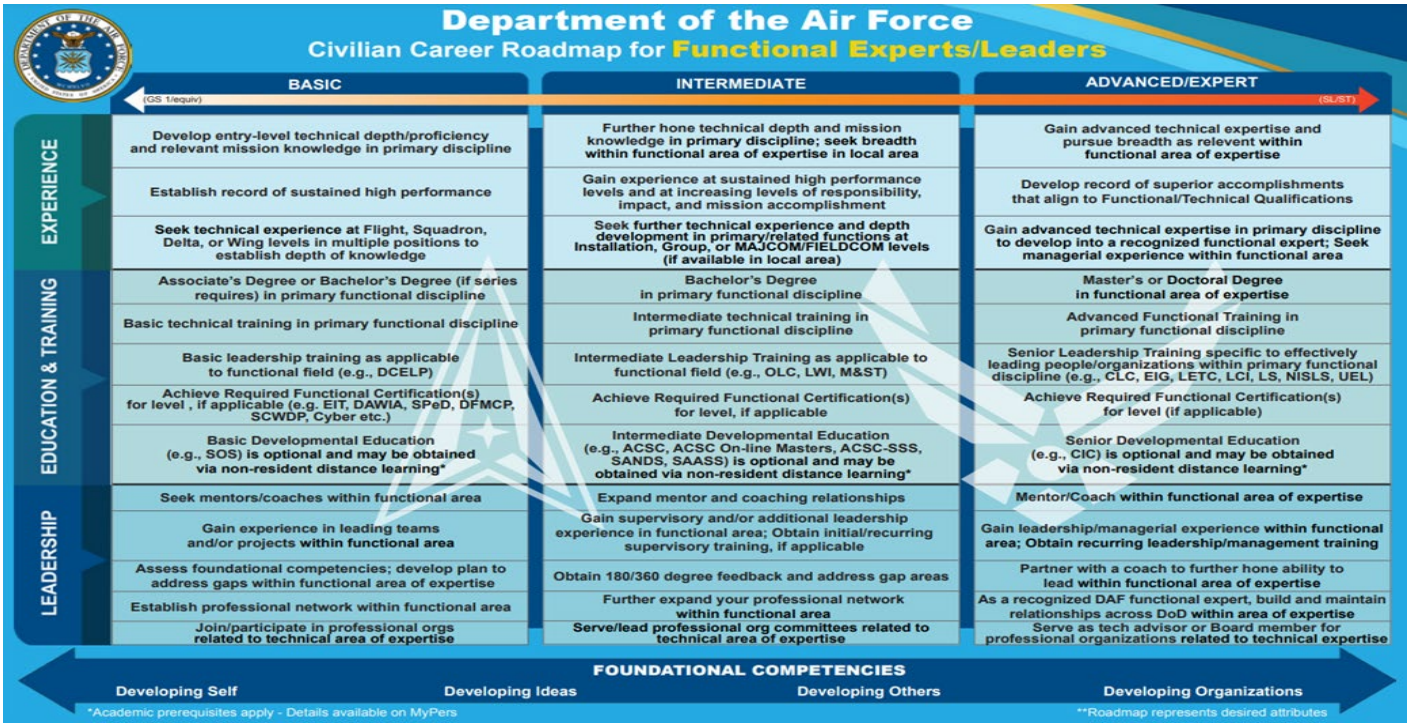


*Figure 2: Department of the Air Force Civilian Career Roadmap for Enterprise Leaders*

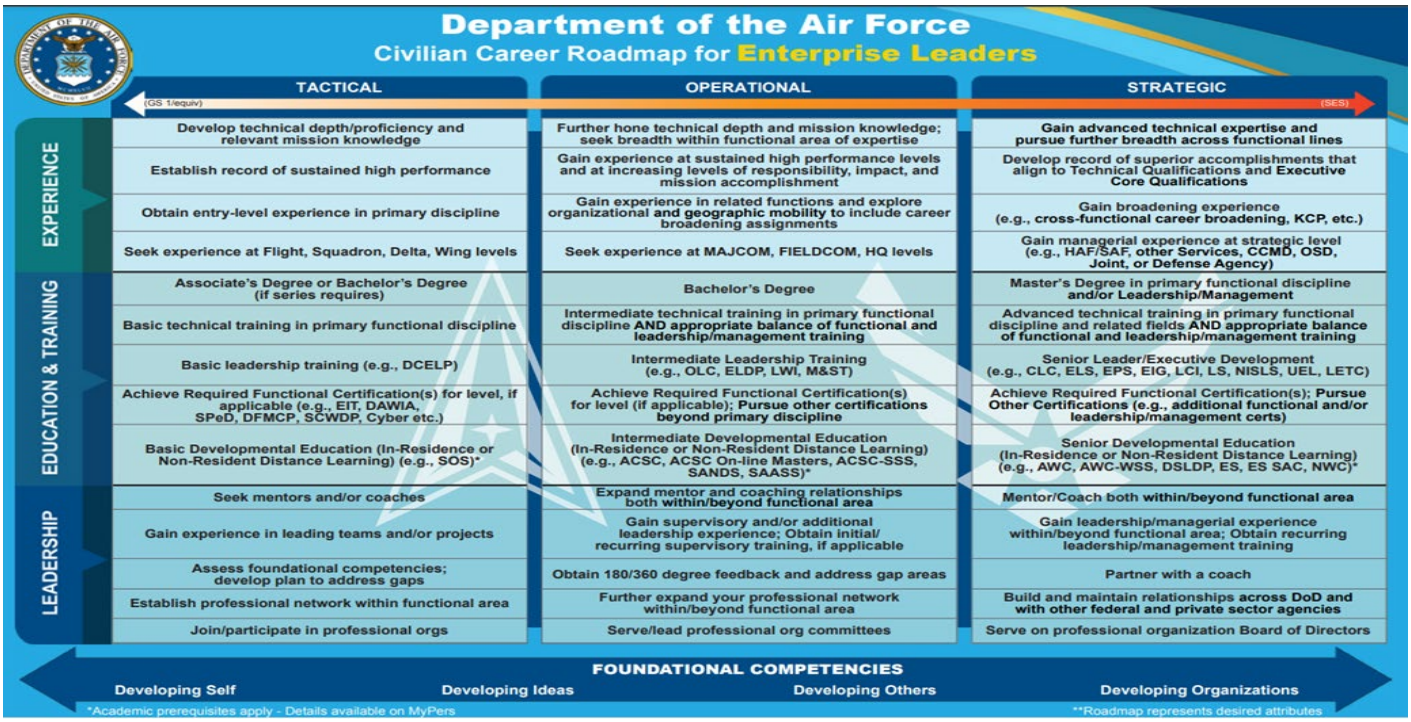


*Figure 3: Department of the Air Force Civilian Career Roadmap for Functional Experts/Leaders*

### 1.2.3 Master Development Plan (MDP)

The MDP is a comprehensive list of desired education, self-development, training, and typical assignments for each level of the career path. The MDP will assist Engineering Technical, Construction Control, and Survey Technical personnel in the development of their Individual Development Plans CBB career path. Refer to Section 1.3.3.1 Occupational Competency Structure for more information on the technical/functional skills, knowledge, abilities, and other characteristics.

### 1.2.4 MyVector

The MyVector site provides numerous resources for Engineering Technical/ Construction Control/ Survey Technical personnel related to Mentoring, Career Planning and Knowledge sharing. The Mentoring section of MyVector can be used to fine tune career goals, experience, and plans. A mentor search capability is available, where Engineering Technical, Construction Control, and Survey Technical personnel can search for a mentor by profile details or make a by-name request for a mentor. MyVector also allows for knowledge sharing through forum-based discussion groups.

MyVector also includes several training resources. The site includes an “Air Force Competencies” section that includes a competencies self-assessment function and related resources. The competencies include the traditional ones such as developing self and developing others, but also include emerging topics such as “Digital Literacy”. Based on the results of the self-assessment, the platform includes a “Competency Improvement Plan” with suggested videos, books, courses, and/or articles that can help improve that focus area. The courses recommended are linked to the Air Force e-Learning site (here) and are available online/for free.

An Engineering Technical/ Construction Control/ Surveying Technical employee can determine a desired career path through the Career Development Plan process known as “vectoring.” The CE Career Field Team (CFT) manages this process with an annual call, which typically goes out each fall. While the vectoring cycle is annual, it generally alternates between even grades (e.g., GS-12 and GS-14) in the even years and odd grades (e.g., GS-11 and GS-13) in odd years. Vectoring for GS-15s is open every year in addition to those opting into consideration for Key Career Position (KCP) and Career-broadening programs. The vectoring process will assist with identifying educational, professional, or experiential gaps and/or needs in their career experience and provide valuable feedback from CE senior leaders on steps to successfully achieve their plan. It is not a promise of a promotion or a commitment to move, but an opportunity to gain insight on how to achieve career goals (e.g. jobs to seek, professional registration, career program choices, PME, or CDE recommendations). Engineering Technical/ Construction Control/ Surveying Technical should explore PME and CDE options located on the MyVector site. This site is used to register for vectoring as well as serves as the hub to self-nominate for PME and CDE. The nomination process for these programs usually occurs in the winter (Access MyVector here).

Members should also review and update their Civilian Career Brief located on MyBiz (here). The Civilian Career Brief is a document that contains an employee’s important personnel

information such as position, educations, training, awards, and performance appraisals and help in career planning.

### 1.2.5 Individual Development Plan

An Individual Development Plan (IDP) will help lay out long-term professional career goals, and identify knowledge, skills, and abilities needed to meet those goals, as well as, developmental assignments, positions, training, and activities, which will assist a supervisor to help you reach those goals. There are a variety of resources available online to develop an IDP. An IDP form suitable for all federal employees can be found in **Appendix C**. A DAF IDP Resource Guide is available (here). The CE CFT recommends use of MyVector to develop IDPs; MyVector is also used for career development opportunities. For example, applicants who apply for CDE submit their applications through MyVector to obtain supervisor review and endorsement of their applications.

### 1.2.6 Depth and Breadth of Experience

Experiencing a wide variety of Engineering Technical, Construction Control, and Survey Technical roles, beginning within the CE Squadron or Group at the installation level, is an important part of gaining depth and breadth of experience, knowledge and capabilities. It is recommended to obtain a diversity of experience at more than one installation falling under different MAJCOMs or components to include varied assignments within other CE Squadron flights. Holding positions in at least two of three flights with Engineering Technical, Construction Control, and Survey Technical authorizations provides broad mission experience that may prepare an individual to hold a leadership position within the CE Squadron or Group. There may be some limitations as the Engineering Technical, Construction Control, and Survey Technical series may be limited when crossing between flights; however, the geospatial series may provide more flexibility to move into community planning, installation management, or real estate positions. Engineering Technical, Construction Control, and Survey Technical personnel should plan to hold an installation level position at the target grade for three to five years prior to holding a base level leadership position. Obtaining experience as an installation supervisor, such as the Portfolio Optimization Element Chief, Asset Accountability Element Chief, Environmental Element Chief (will require adherence to OPM qualification standards depending on series), Operations Engineering Element Chief, or Project Management Element Chief at the early stages of a career is essential to ensure advancement to an intermediate or headquarters level leadership position later in the career.

### 1.2.7 Geographic Mobility

For those willing and able to be geographically mobile, there may be more opportunities to achieve breadth and depth in career experiences. Effective civilian force development depends upon filling high-level positions with those who have a variety of work experiences. Holding positions at multiple installations exposes an Engineering Technical/ Construction Control/ Surveying Technical employee to a wider understanding of DAF missions. For example, experiencing operations at a fighter or heavy aircraft, research and development, or training and education focused installation provides unique experiences. Engineering Technical, Construction Control, and Survey Technical personnel should also consider size of installation and geographic location when considering breadth of experiences at the installation level.

Engineer requirements at an overseas base are different from those at a Continental United States (CONUS) base, as are the requirements at a small single mission installation vis-à-vis a large multi-mission installation. Experience working with a Reserve Component mission will also provide an understanding of the benefits, limitations, authorities, and proper application of the different components to meet Total Force mission requirements. Variations in climate (southern coastal vs northern tier) can also provide breadth of experience. When applying for installation level leadership positions, this depth and breadth of experience may be the factor that makes an Engineering Technical/ Construction Control/ Surveying Technical employee the best-qualified candidate for a selection to fill a vacancy. This is increasingly true when applying for non-leadership or leadership positions at the intermediate and headquarters level of development.

### 1.2.8 Career Broadening

This CFETP has addressed the need for Engineering Technical, Construction Control, and Survey Technical personnel to broaden their career through a broad breadth of experiences whether at the installation or by relocating to another installation. The DAF and the CE community also have a formal career-broadening program, which is an integral part of the DAF leadership development framework. It is designed to build functional and institutional competencies while enhancing leadership perspective. More information is available (here) (log into myPers first to access the site) and in DAFMAN 36-142(here). Career broadening assignments advertised on USAJobs (here), although of relatively short duration (36 months), are complex and demanding, but also increase and broaden experiences. Career broadening assignments are designed to enhance CE professional's breadth of experience and diversity of thought. The key in determining which career broadening assignment to pursue is to consider which opportunity will enhance the strategic skills and perspective required to meet individual goals.

### 1.2.9 Professional Credentialing

Professional credentialing and/or higher education is highly desirable. This usually requires a commitment of time and money outside of the normal work environment, and employees are encouraged to discuss the various options with their supervisor and/or mentor. In a memo dated 21 Oct 21, HQ AF/A4C established policy for the credentialing of employees in the DAF Civil Engineering organizations (here). The DAF seeks to attract and develop employees who possess abilities in their profession as evidenced by credentialing. Credentialing is indicative of a workforce with strong technical skills, developed and exhibited through a rigorous program of education, experience, and testing. There are two tier levels of credentialing. Tier I identifies credentials most valued in a functional area based on extensive knowledge and experience. Often a license is granted by external agencies based upon a set of rigorous standards through testing and experience. Tier II credentials are those showing attainment of certain levels of competency or skill. Types of credentials include Land Surveyor-in-Training, Certified Survey Technician, Geographic Information Systems Professional, GEOINT Professional Certification, Engineer-in-Training, Certified Construction Manager, Construction and Building Inspector, Plans Examiner, Concrete/Aggregate Field/Laboratory Technician, Construction Materials Testing, Geographic Information Systems Professional, and Computer-Aided Drafting Certifications, Project Management Professional (PMP). Members are highly encouraged to obtain appropriate credential(s) to heighten their technical skill level.

Additional details on certifications may be found at the Department of Defense (DoD) Civilian Credentialing Opportunities On-Line (DCOOL) website (here). The site allows users to search by occupational series code or title and find general information on credentialing relating to the individual federal occupational series. Clicking on a credential title in the system provides detailed information about the credential, such as a description, its eligibility requirements, exam topics, and recertification requirements.

Expenses for training and professional registration can be paid by the unit. Specifically, Title 5, U.S.C., Section 5757, provides that an agency may use appropriated funds to pay for expenses for employees to obtain professional credentials, including expenses for professional accreditation, State-imposed and professional licenses, and professional certification; and examinations to obtain such credentials. This authority may not be exercised on behalf of any employee occupying or seeking to qualify for appointment to any position that is excepted from the competitive service because of the confidential, policy-determining, policymaking, or policy advocating character of the position. This authority is permissive, not mandatory. It does NOT establish an entitlement. Because the authority is codified in Title 5 U.S.C., Government Organization and Employees, this authority is applicable to civilian employees only and not to military members. The use of appropriated funds to pay expenses to obtain professional credentials does not extend to employees' memberships in professional organizations unless the membership is a prerequisite to obtaining the professional license of certification.

## 1.3 Section C: Competencies

### 1.3.1 Introduction

The Engineering Technical, Construction Control, and Survey Technical duties and responsibilities are position-specific at most installations. However, Civil Engineer personnel generally must demonstrate collaboration, facilitation, and functional analysis skills through leadership and core Occupational Competencies (OCs), where core OCs are critical, culturally foundational, and typical to being a leader in the CE enterprise.

### 1.3.2 Leadership Competencies

The Federal Managerial Framing Network identifies additional leadership competencies for managers at different stages of their career, including Technology Management; Leveraging Diversity; Financial Management; Creativity and Innovation; Political Savvy; Partnering; Human Capital Management; Resilience; Influence/Negotiating; External Awareness; Strategic Thinking; Entrepreneurship and Vision. Effective writing skills and oral communications are also a key skill required of strategic leaders. More information is available (here).

Engineering Technical/Construction Control/Survey Technical personnel wishing to pursue leadership roles may wish to begin developing the ECQ leadership competencies of:

- **Competency 1. Leading Change**: Ability to bring about strategic change, both within and outside the organization, to meet organizational goals with an inherent ability to establish an organizational vision and implement it in a continuously changing environment.

- **Competency 2. Leading People**: Ability to lead people toward meeting the organization's vision, mission, and goals. Inherent to this ECQ is the ability to provide an inclusive workplace that fosters the development of others, facilitates cooperation and teamwork, and supports constructive resolution of conflicts.

- **Competency 3. Results Driven**: Ability to meet organizational goals and customer expectations. Inherent to this ECQ is the ability to make decisions that produce high-quality results by applying technical knowledge, analyzing problems, and calculating risks.

- **Competency 4. Business Acumen**: Ability to manage human, financial, and information resources strategically

- **Competency 5. Building Coalitions**: Ability to build coalitions internally and with other federal agencies, State and local governments, non-profit and private sector organizations, foreign governments, or international organizations to achieve common goals.

More information on ECQs is available (here).

### 1.3.3 Occupational Competencies (OC)

Core OCs are foundational, common, critical, and cultural to being a leader in the CE enterprise, as well as providing the building blocks for further force development as a SMS or SME. A common OC is expected in many positions filled by an Engineering Technical, Construction Control, and Survey Technical position. A critical OC is one where an Engineering Technical, Construction Control, and Survey Technical employee must be able to make informed decisions that can affect the overall life, safety, and health of squadron members, base personnel, or the surrounding community, understanding the limitations of financial or personnel resources. Lastly, a cultural OC is one that is important as a representative of a leader within the CE enterprise.

The OCs are not comprehensive for all positions. It is expected that positions available to the growth of the Engineering Technical, Construction Control, and Survey Technical positions will be centered on one of the two career tracks as an enterprise leader or functional SME. While Engineering Technical, Construction Control, and Survey Technical personnel are expected to demonstrate portions of the competencies of a Survey Technical position, for example, the member is not expected to know all the competencies unique to being a Survey Technical unless they have filled that position.

> *The Department of the Air Force defines competencies as an attribute that an individual possesses to successfully and consistently perform a given task, under specified conditions or meet a standard of performance. This enables Airmen to perform their jobs and contribute to the overall success of the Department of the Air Force. Competencies influence human performance and have a subsequent impact on mission and organizational success.*

Engineering Technical, Construction Control, and Survey Technical personnel turn OCs into required capabilities. The success of current and future operations lies in the direct and deliberate development of its Airmen. Development occurs across the distinct but related elements of education, training, and experience. Foundational education is primarily provided to the CE career field through The Civil Engineer School (TCES). Specialized (to include advanced degrees) and leadership training can be found through various sources and is discussed in other sections of the CFETP. Lastly, experience is the application of education and training for the individual at his or her organization. The elements of the continuum of learning are complementary; each enhances the values of others. The blend of all three elements across an entire career is key in the development of Civil Engineers who pursue leadership roles to achieve occupational competencies and meet DAF operational needs. Force development is a responsibility of both the individual and CECFT. Engineering Technical, Construction Control, and Survey Technical personnel who wish to advance their careers and take on positions with a greater depth of knowledge and experiences must take on the responsibility to guide their own competency development, while the CECFT provides a wide range of developmental opportunities.

### 1.3.4 Occupational Competency Structure

The OCs provide a framework that describes the technical/functional skills, knowledge, abilities, and other characteristics required to perform at that level. Additional leadership

competencies discussed in paragraph 1.3.2 provide a framework for those on a strategic leadership track and are described through ECQs.

The Engineering Technical, Construction Control, and Survey Technical competency model has three proficiency levels: Basic, Advanced, and Master. Proficiency levels are progressively build on one another. Each criterion helps enable members to determine attainment of a competency at the different proficiency levels through observable and measurable behaviors.

**Basic (B)** – The member comprehends the basic order of tasks but requires guidance and supervision to minimize errors and ensure successful accomplishment. The skills learned at this proficiency is at a foundational knowledge level.
**Advanced (A)** – The member demonstrates the ability to perform most tasks with limited guidance and supervision with some errors or omissions. The skills learned at this proficiency allows the member to apply the foundational knowledge earned at the basic level with various degrees of success.
**Master (M)** – The member consistently performs tasks with little or no assistance, and the result contains few, if any, errors, or omissions. The skills learned at this proficiency allows the member to create and synthesize products past the basic and advanced level. This is most often achieved with experience gained throughout a career.

## 0802 Engineering Technical

### Drafting (CAD) and Design

| Requirements Identification<br>TR: ERDC/ITL TR-12-X, A/E/C CAD Standard; TM 3-34.51, American National Standards Institute (ANSI); Architectural and Graphic Standards (AGS) | GS 3-5<br>(1-3 yrs) | GS 7-9<br>(3-10yrs) | GS 11-12<br>(10+yrs) |
|---|---|---|---|
| Prepares engineering drawings | B | A | M |
| Prepares engineering drawings utilizing CAD software | B | A-M | |
| Stores, catalogs, maintains, and updates as-builts drawings | B | A-M | |
| Operates and maintains print reproduction equipment | B | A | A |
| **Requirements Validation** | | | |
| Prepares changes to drawings and develops sets of orthographic and isometric diagrams from incomplete sketches and/or layouts for small buildings (e.g., a single-family residence, etc.), prepares complete sets of shop drawings from layouts or sketches, and/or updates compilation sheets of underground utilities in an area. | B | A | M |
| Uses software and associated equipment to prepare complete sets of drawings. May be dependent upon the designer to understand the design concept and obtain information necessary to make the drawings. Ability to prepare drawings that are neat, accurate, appropriately dimensioned, and logically arranged, utilizing the methods and techniques of drafting. | B | A | M |
| Maintains copies of all as-built and new designs on computer storage media. Research original drawings and transcribes information and codes into system. Backs up master data base and runs hard copy reports on printer. Research and extracts drawings from files and updates file system for new inputs. | B | A | M |
| Sets up reproduction equipment and adjusts controls for proper operation and optimum print quality. Maintains an adequate supply of required reproduction supplies. Assists civilian and military personnel with the use of equipment (e.g., replacing paper and toner, unjamming, etc.). Responsible for obtaining reproduction of prints by contract services as well as providing required prints to contracting personnel. | B | A | M |

### Building Information Modeling (BIM)

| Application of the competencies related to Building Information Modeling (BIM) principles, drawing setup, drawing commands, BIM management, and drawing production. | | | |
|---|---|---|---|
| Applies basic drafting skills in procedures, techniques, tools, materials, and/or equipment appropriate to the area of specialization. | B | A | M |
| Possesses knowledge of principles, practices and procedures. | B-A | M | |
| Demonstrate a working knowledge of BIM hardware and software capabilities including drawing setup, project template, units, plot styles, model views, model organization (levels & grid), and collaboration (work sets) | B-A-M | | |
| Duties and tasks are standardized. Performs some more advanced functions as part of training and development. Resolves routine question and problems and refers more complex to higher levels. | B-A | M | |

## 0809-Construction Control

| Contract Management | | | |
|---|---|---|---|
| TR: DoDD 5500.7; AFI 32-1023, 32- 6002; AFI 32-1001; AFPAM 32- 1005, AFPAM 32-1000 (TM 3- 34.41); AFI 63-124: AFPAM 32- 1006; AFI 64-123; FAR Part 37.6; DoDD 5500.7; FAR; AFCEE Program Managers Guide for Design and Construction; AFPAM 91-210; USACE EM 385-1-1; AFQTP 3E5X1 Module 6; CE-VLC Construction Safety and Health Requirements (DL) | | | |
| Performs inspection and surveillance of difficult and complex construction projects | B | A-M | |
| Understand and coordinate the AF Form 103 process | B | A-M | |
| Reviews and interprets construction plans and specifications | B | A-M | |
| Performs duties related to inspection of equipment and materials | B | A-M | |
| Maintains continuing surveillance over contractor operations and ensures that the contractor's work is carried out in accordance with contract plans and specifications | B | A-M | |
| Compiles and maintains various data and prepares reports to include AF IMT 3064/3065/1477 | B | A-M | |
| Understand and comply with Federal Acquisition Regulation (FAR) | B | A-M | |
| **Indefinite Delivery Indefinite Quantity (IDIQ)** | | | |
| Execute Simplified Acquisition of Base Engineer Requirements (SABER) | B | A-M | |
| Execute Multi-Award Construction Contract (MACC)/JOC | B | A-M | |

| | | | |
|---|---|---|---|
| Execute Service Contracts | B | A | M |
| **Installation Planning/Mapping** | | | |
| **TR: AFIs 32-1021, 32-1022, 32-1023, 32-1024, 32-1032, 32-6002, 32-7062, 32-10140, 32-10141; AFMAN 91-201, AFPAM 32-1104v2, 32-1005; CONOPs - ESM and ESSP; AFQTP 3E5X1 Module 7; CE-VLC Wartime Construction Management Course (DL)** | | | |
| Apply Installation Development Plan Requirements | B | A | M |
| Apply Site Planning Requirements | B | A | M |
| **Construction Site Materials** | | | |
| **TR: FM 5-472 [AFJMAN 32-32- 1221(I)]; UFC3-220-10N; ASTM D2487; ASTM D6951; AFQTP 3E5X1 Module 8; CE-VLC Soil Testing under Field Conditions Course (DL)Metering devices** | | | |
| **TR: ASTM D2216, C136, D1883, D4318, D698, D1557, D1556, C143, C1064, C231, C31, C192, C39, C78** | | | |
| Assist in determining site material stability | B | A | M |
| Assist in identifying soil classification by performing odor, sedimentation, bite/grit, feel, roll or thread, wet shaking, breaking or dry-strength, ribbon, shine tests, and hasty assessment. | B | A | M |
| Understand and calculate moisture content, specific gravity. Conduct CBR, Atterberg limit test, and proctor/modified proctor test | B | A | M |
| Perform concrete slump test | B | A-M | |
| Understand different pavement types and conduct asphalt assessments, concrete assessments | B | A | M |

## 0817-Survey Technical

| | | | |
|---|---|---|---|
| **SURVEYINGTR: Surveying with Construction Applications; Surveying: Theory and Practice; ATTP 3-34.80 (Geospatial Engineering); TM 3-34.55 (Const. Surveying); EM 1110-1-1002; EM 1110-1-1005; BLM Manual of Surveying Instructions; Manufacturers operating manuals, Civil Software Package; AFQTP 3E5X1 Module 5; CE-VLC Survey Grade GPS Course (DL)** | | | |
| **Fundamentals of Surveying** | | | |
| Understand and perform the basic components and operations of Global Navigation Satellite System (GNSS) survey theories such as Global Positioning System (GPS), auto-levels, and electronic total stations. | B | A-M | |
| Perform survey math including numerical methods such as coordinate geometry, least-squares adjustment, and network adjustments. Understand GNSS data post-processing (such as National Geodetic Survey's Online Positioning Service) and real time (such as Real Time Kinematic) | B | A-M | |

| | | | |
|---|---|---|---|
| Understand and apply coordinate system references, datum, grids, remote sensing, including aerial imaging, image interpretation, image processing, multispectral and hyperspectral remote sensing, and full-motion video | B | A-M | |
| Acquire and integrate a variety of field data, image data, vector data, and attribute data to create, update, and maintain GIS databases | B | A-M | |
| Collect and integrate carrier phase survey grade GNSS positions and associated attribute data | B | A-M | |
| Utilize, create and edit feature code libraries and data dictionaries | B | A-M | |
| Perform stakeout of roads, utilities, buildings, mishap surveys, and generate contours | B | A-M | |
| Accurately input multiple source data from field collector, digitizing, scanning, crowd sourced, real time feeds, data conversion and integration | B | A-M | |
| Work as chief-of-party on simple construction or surveys of third or fourth order of accuracy and of limited scope and complexity. Computes, adjusts, and prepares surveying data using calculating equipment. Performs reconnaissance, location, and construction surveys (e.g., roads, utilities, runways, taxiways, aprons, facilities, etc.). Runs traverse lines, establishes elevations, and level circuits. Runs cross section and profile levels and determines cut and fill volumes. Performs maintenance of survey equipment consisting of field adjustments. | B | A-M | |

## 1.4 Section D: Resource Constraints

This section identifies known resource constraints, which preclude optimal and desired training from being developed or conducted, including information such as costs and manpower. Limiting resources will put strains on the career field to adequately cover all training. Priority will go to mission essential training courses, then focus on mission enhancement training. TCES continues to develop Distance Learning courses to mitigate the effects of resource limitations.

### 1.4.1 Tuition Assistance (TA)

The goal of the Civilian Tuition Assistance Program (CTAP) is to assist civilians in their continued self-development and includes coursework at the associate, bachelor's, master's, and doctorate levels at an accredited college or university. TA is used for course(s) that contribute to occupational and institutional competencies, special interest needs, and readiness by supporting the current and future needs of the DAF.

#### 1.4.1.1 Eligibility

Funds are available for individuals who are permanent full time appropriated fund employees (including wage grades). Applicants must currently have an acceptable performance appraisal rating and have an approved education goal in the Air Force Virtual Education Center (AFVEC).

#### 1.4.1.2 Funding Management and Limitations

TA is available for two (2) courses per semester/quarter. There is no limitation on the number of credit-by-exam tests. TA can be used for up to 75% of the tuition cost but may not exceed $250.00 per semester hour or $166.00 per quarter hour and $4,500 per fiscal year. Students are responsible for the remainder of the expense.

TA can be used for 100% of credit-by-exam fees at an on-base and/or fully funded testing center. TA does not pay professional certification fees, charges related to accrediting work or life experiences or the following examination fees: Graduate Management Admissions Test (GMAT), Graduate Records Examination (GRE), Law School Admission Test (LSAT), Medical College Admissions Test (MCAT), Standard Achievement Test (SAT), or Admissions College Test (ACT).

TA is not provided, in whole or in part, for courses for which the employee is receiving other federal or state tuition subsidies such as Veterans Administration educational benefits, scholarships or grants, etc. However, TA can be used in conjunction with student loans. TA funded under CTAP is not an entitlement or condition of employment and past approved TA does not guarantee future funding. TA funding does not apply to courses at a level lower or equal to a degree already attained by the applying member.

### 1.4.2 TDY Funding

Many training opportunities exist away from the installation and personnel would attend in a temporary duty status (TDY) that pays for transportation, lodging, meals, incidentals, and course costs. Funding for TDYs come from various sources to include TCES, AFCEC, MAJCOMs, and the unit.

# Part II – Training

## 2.1 Section A: Professional Training and Education

### 2.1.1 Purpose

Formal training is either in-person or distance learning. Successful Engineering Technician/Construction Control/Survey Technical will establish technical competencies and understand the DAF culture. Individuals will join the DAF Civil Service at different points in their careers; this CFETP is written from the perspective of entering the CE enterprise at any time in an Engineering Technician/Construction Control/Survey Technical career. Foundational training requirements are detailed in **Section 1.2.4**.

### 2.1.2 Training

Career goals will likely evolve as one navigates their career. As an individual increases their depth and breadth of experience and moves to different positions within or among organizations, perspectives and desires will contribute to shaping those goals. However, it is important to determine ultimate career goal, in terms of leadership or technical track, as early as possible. Training decisions should be informed with the long-game in mind, which may impact the type of training an individual should pursue.

The DAF defines Force Development as, “a deliberate process of preparing Airmen through the Continuum of Learning (training, education, and experience) with the required competencies to meet the challenges of the 21st Century.” The below topics discuss additional ways to obtain training, education and experience through offerings available to DAF Civil Servants. Additional information about these and other topics are available at the CE CFT SharePoint site (here).

#### 2.1.2.1 Request for DAF Training

With supervisor’s approval, Engineering Technician/Construction Control/Survey Technical members can request to attend training and education opportunities to increase their occupational knowledge. There are multiple ways DAF employees can follow to obtain approval and funding to attend training and education opportunities.

First, the DAF has program element code (PEC) 88751F to fund civilian functional/occupational training requirements across major commands, field operating agencies, direct reporting units, and force development flights. To identify annual training needs for the fiscal year, the Deputy Chief of Staff-Manpower, Personnel, and Services (AF/A1) issues a data-call to receive inputs using the Civilian Automated Training Input Program (CATNIP) for AF-wide consolidation. Funding for training is prioritized based on priority as defined in **Table 4**. Due to limited resources, funding focuses on priority 1 requirements. Engineering Technician/Construction

Control/Survey Technical members should discuss with their supervisor on how to add their training/education need(s) to the data call response.

**TABLE 4 TRAINING PRIORITY CATEGORIES***

| Priority | Definition |
|---|---|
| 1 | Required by Public Law, Executive Order, DoD Directive (to include occupational certification and licensing, as defined in position description as a condition for continued employment). Priority indicator is classified as "Critical/Mandated." |
| 2 | Maintains and develops critical occupational/functional competencies identified by DAF publications or other guidance. Priority indicator is classified as "Essential." |
| 3 | Maintains and develops critical occupational/functional competencies as directed or identified by DAF MAJCOM (e.g.; publications, memoranda). Priority indicator is classified as "Recommended." |
| 4 | Maintains and develops critical occupational/functional competencies as directed or identified by DAF installation (e.g.; publications, memoranda). Priority indicator is classified as "Recommended." |

* Source: DAFI 36-2670, Total Force Development, 25 June 2020

If training needs cannot be funded through the data call described above, an additional way to obtain training funds is through the use of organizational unit funds. Engineering Technician/Construction Control/Survey Technical members would need to discuss with their supervisor on the availability of these funds to meet training needs.

Finally, AFIT-The Civil Engineer School has classes; go to www.afit.edu/ce to look for applicable classes to attend. A supervisor's approval is required along with completion of the online registration form. After being accepted, AFIT-The Civil Engineer School provides a Line of Accounting (LOA) for students to use in making travel arrangements. Rental cars are unit funded; not funded by AFIT. There is no tuition cost to attend a class except for students who are contractors.

### 2.1.3 Civilian Development (CD) Programs

Development programs, including the resident and nonresident PME, leadership training, experiential focused learning, and higher-level strategic leadership programs are learning opportunities available to selected personnel to enhance their professional growth. CD can consist of short- and long-term leadership, academic, and fellowship training programs. There are three types of CD: PME, Academic Programs/ Fellowships, and Leadership Seminars. The website for applying is MyVector: https://myvector.us.af.mil/MyVector/Home/Dashboard. The package creation timeline begins in January with the CD Call, continues into February for deadline for employees to submit their package, and ends in March with the deadline for the endorser to provide inputs. Individuals are chosen for the in-residence version of these programs through a formal nomination and selection process, which begins with self-nomination and a recommendation from their leadership chain as part of annual nomination calls. Individuals should discuss their interest in CD programs with their supervisor to understand how these programs could enhance their professional growth. Previous job

performance, accomplishments, and leadership potential are typically factored into each nomination and selection.

PME includes learning the history and strategic business of the DAF. Eligibility for each CD level of PME varies for each program.

**Basic Developmental Education (BDE)**—GS-09 to 12, or equivalent
- Squadron Officer School (SOS)

**Intermediate Developmental Education (IDE)** —GS-12 to 13, or equivalent
- Air Command & Staff College (ACSC)
- Air Command & Staff College – Online Master's Program (ACSC-OLMP)
- Air Command & Staff College + School of Advanced Air and Space Studies (ACSC+SAASS)
- Air Command & Staff College – Schriever Space Scholars (ACSC-SSS)
- School of Advance Nuclear Deterrence Studies (SAND)

**Senior Development Education (SDE)** —GS-14 to 15, or equivalent.
- Air War College (AWC)
- Air War College – West Space Seminar (AWC)
- College of Information & Cyberspace (CIC)
- Defense Senior Leader Development Program (DSLDP)
- Dwight D. Eisenhower School for National Security and Resource Strategy (ES)
- Dwight D. Eisenhower School for National Security and Resource Strategy – Senior Acquisition Course (ES-SAC)
- National War College (NWC)

**Academic/Fellowships**—Varying GS levels
- Air Force Institute of Technology (AFIT)
- Air Force Legislative Fellows (LEGIS)
- Air Force National Laboratories Technical Fellowship Program (AF-NLTFP)
- Bachelor's Degree
- Civilian Associate Degree Program (CADP)
- Education With Industry (EWI)
- Master's Degree
- President's Management Council – Interagency Rotation Program (PMC-IRP)
- RAND Research Fellowship Program (RAND)
- White House Leadership Development Program (WHLDP)

**Leadership Seminars (Short Courses)**
- Civilian Leadership Course (CLC)
- Defense Civilian Emerging Leader Program (DCELP)
- Developing Supervisor Course (DSC)
- Enterprise Leadership Seminar (ELS)
- Enterprise Perspective Seminar (EPS)
- Leading Change and Innovation (LCI)
- Leading Department of the Air Force Organizations (LDAFO)
- Leading Strategically (LS)
- National and International Security Leadership Seminar (NISLS)
- The Supervisor as Leader (TSL)
- Upgrading Your Executive Leadership Approach (UEL)

Completing PME courses at the appropriate level (distance learning or in-person) is key for advancement within the CE Career Field. Note, completing the previous PME course is not a prerequisite for starting the next PME course; individuals should take the PME course appropriate for their current grade.

Most programs do not require the applicant to be mobile; some include a short-duration TDY. Basic eligibility is 2 years of "Federal" civil service by the application deadline. Distance Learning programs for CD can be started at any time if minimum requirements are met.

Individuals apply to Air University directly. Details on all CD opportunities are available on the myPers Civilian Force Development Home Page, to include PME, the various Academic programs, and Fellowships, and Leadership Seminars (here).

### 2.1.4 Civilian Strategic Leadership Program (CSLP)

The Civilian Strategic Leadership Program (CSLP) is the DAF civilian enterprise development program designed to provide selected GS-13/14/15 (or equivalent) DAF employees competencies needed to build a federal corporate culture that drives for results, services customers, and builds successful teams and coalitions within and outside the organization. GS-13s may apply for permanent promotion opportunities for GS-14 Installation-level assignments. More information about the CSLP can be found (here). The Deputy Director of Installation Support/Deputy Mission Support Group Commander is one of the more common positions, which is usually filled by the CSLP, and requires civilian supervisory experience.

### 2.1.5 Key Career Positions (KCP)

Key Career Positions (KCPs) are stepping-stones for individuals to gain expertise that may qualify them to move from functional specialists or experts to functional leaders. KCPs help applicants gain experience at the intermediate and headquarters levels. KCPs are located throughout installation, AFCEC, AFIMSC, NGB, MAJCOM, and HAF. These positions have a mobility agreement requiring the incumbent to move positions after three to five years. The KCPs ensure multiple intermediate-level personnel have the opportunity to gain breadth of experience. Additional information is available (here).

### 2.1.6 Temporary Duty (TDY) Assignments

When considering areas an individual may be lacking in experience, they may consider a TDY or Temporary Assignment. TDY opportunities are available for both CONUS and OCONUS. Additionally, it may be possible to request a temporary assignment, or additional duty request, within their organization to gain the experience needed to understand the many facets of the Civil Engineer mission more fully.

### 2.1.7 Documentation of Training

Use the IDP in Appendix C to document training requirements and completion of formal training requirements. Each Engineering Technical/ Construction Control/ Surveying Technical personnel career IDP should be developed with an understanding of the basic competencies

and skills required to be a DAF CE Functional Leader/SME or Enterprise Leader. The IDP should be reviewed and updated annually.

### 2.1.8 Competencies

Engineering Technical/ Construction Control/ Surveying Technical members should have the occupational competencies to successfully perform their jobs. As discussed previously, the Occupational Competencies are listed in section 1.3.3. In addition, Engineering Technical/ Construction Control/ Surveying Technical members are encouraged to develop Leadership Competencies from section 1.3.2 (Leading Change, Leading People, Results Driven, business Acumen and Building Coalitions); especially those on a leadership track.

### 2.1.9 Continuing Education Requirements

In addition to the formal training requirements, Engineering Technical/ Construction Control/ Surveying Technical members may be required to complete professional training in accordance with their respective certifications and credentials. The formal training courses through TCES count towards the continuing education requirements; however, there are many additional opportunities to continue to learn and maintain relevant competencies which are listed in Appendix B.

### 2.1.10 Symposium and Workshop Attendance

Attending symposiums or workshops provide opportunity to receive training hours in a short period of time. Many DAF and larger DoD sponsored events include courses relevant to or geared towards any Engineering Technical/ Construction Control/ Surveying Technical development path.

## 2.2 Section B: Leadership and Mentorship

### 2.2.1 Mentoring for DAF Engineering Technical/Construction Control/Survey Technical Personnel

Engineering Technical/ Construction Control/ Survey Technical personnel should make it a priority to seek advice from more experienced DAF leaders, to include seeking advice and mentorship from military leaders, as well as senior civilians (e.g., SES mentor). DAF leaders, be they military or civilian leaders, as well as other senior personnel in various functional areas, have rich insights developed and learned through years of experience, and they are often excited to coach and mentor other professionals. When seeking this opportunity, Engineering Technical, Construction Control, and Survey Technical personnel should have questions prepared, have a vision/plan for the next 5-10 years included on an IDP (Appendix C), which may include plans for CD, career broadening, separation, retirement, etc., and have a biography and resume ready. Prior to meeting with a mentor or coach, Engineering Technical, Construction Control, and Survey Technical personnel should contemplate how they may be viewed by the mentor (i.e., consider the perspective of others when evaluating personal performance) and anticipate the types of questions the mentor may ask, such as career aspirations, work values, unique knowledge, skills, or abilities, and preferred types of work and learning. Additional information about mentoring is available (here).

Engineering Technical, Construction Control, and Survey Technical personnel should explore the career competencies (discussed in Section 1.3 of this CFETP), perform proficiency self-assessments, identify education, training, and experience to attain the highest level of proficiency, and enter into their IDP. Not all Engineering Technical, Construction Control, and Survey Technical may achieve the desired level of proficiency; gaps between expected and actual proficiency levels form discussion points with mentors to help target growth and development issues and IDP additions. Engineering Technical, Construction Control, and Survey Technical personnel should focus on competencies needed for the current assignment and then explore competencies needed for the next assignment. Engineering Technical, Construction Control, and Survey Technical may also wish to review resources used to mentor CE officers at the Air Force Officer Classification Directory (AFOCD) on the AFPC website (here). See also AFMAN 36-2643, Air Force Mentoring Program (here). Finally, the Treasury Executive Institute offers online and in-person leadership courses and coaching for GS-14s through SES, or equivalent (here).

There is no single, optimal career path to ensure career success for an Engineering Technician/ Construction Control/ Survey Technical individual. A successful career path includes steady growth in job responsibility and professional development with a broad variety of experience. Periodically, Engineering Technical, Construction Control, and Survey Technical personnel should review their personal situation and their organization's needs to reassess their career path goals. They may consider personal strengths, weaknesses, training or experience gaps, commitment to the organization's mission, and short and long-term goals. Organizationally, Engineering Technical, Construction Control, and Survey Technical personnel should consider their organization's needs, training resources, position availability, and promotion opportunities.

How well an Engineering Technical/ Construction Control/ Surveying Technical individual performs in their current position is the most important factor in determining their future success.

### 2.2.2 Mentorship

The DBCE is often one of the highest-level civilians that many CE Airmen encounter at the installation, and often he/she has a good deal of knowledge and advice that can be passed on to first or second -level civilian supervisors and leaders within the squadron. All Engineering Technical, Construction Control, and Survey Technical personnel in a leadership role should work with high performing civilian team members to develop an IDP that identifies training and career path activities valuable to the growth of future civilian leaders. Leaders should encourage deserving team members to complete the civilian Vectoring process, pursue training opportunities and explore career broadening assignments. A myriad of training opportunities are available for leaders on how to coach and develop employees at ACQ NOW (here).

Courses can be taken at DAU's digital campus (here).

OPM's center for Leadership Development helps training officers, managers and supervisors meet the challenge of succession management to include helping future leaders assess leadership effectiveness, gain core knowledge and develop critical skills. The current course schedule is available (here).

# Appendices

## Appendix A: Terms and Abbreviations

**Advanced Training (AT*).*** A formal course training toward a technical or supervisor level Air Force Specialty (AFS). Training is for selected career Airmen in the advanced technology level of the AFS. Graduates are not awarded a new AFS.

**Air Force Career Field Manager (AFCFM).** An individual on the Air Staff charged with the responsibility for overseeing all training and career field management aspects of an Air Force specialty or group of specialties.

**AF/A4C. The Directorate of Civil Engineers.** In accordance with Air Force Policy Directive (AFPD) 32-10, Installations and Facilities, AFPD 32-20, Fire Emergency Services, 18 HAFMD1-38 21 JUNE 2021 AFPD 32-30, Explosive Ordnance Disposal, AFPD 32-60, Housing, AFPD 32-70, Environmental Considerations in Air Force Programs and Activities, AFPD 32-90, Real Property Asset Management, AFPD 10-2, Readiness, and AFPD 10-25, Emergency Management, the Director of Civil Engineers formulates DAF Civil Engineer strategy, policy and implementation guidance supporting AF and DoD strategic goals and objectives, and manages CE enterprise governance to guide the development and execution of the associated strategy, policy, implementation guidance, and related oversight.

**AFCFM or CFM. Air Force Career Field Manager.** The AF focal point for the designated career field within a functional community. Serves as the primary advocate for the career field, addressing issues and coordinating functional concerns across various staffs. Responsible for the career field policy and guidance. Must be appointed by the Functional Manager (FM) and hold the grade of colonel/GS-15 (or equivalent).

**AFCEC. Air Force Civil Engineer Center**. AFCEC provides civil engineering services and enterprise lifecycle leadership to AF and SF installations that enable the warfighter. AFCEC is installation focused and globally linked to provide best-practice solutions to Airmen…anytime and anywhere. AFCEC is the cornerstone of the CE enterprise by managing all centralized CE functions and optimizing key capabilities.

**Air Force Credentialing Opportunities On-Line (AF COOL) Program.** AF COOL replaced the CCAF Credentialing and Education Research Tool (CERT). The AF COOL Program can be accessed through the AF Virtual Education Center (AFVEC). The site provides a research tool designed to increase an Airman's awareness of national professional credentialing and CCAF education opportunities available for all Air Force occupational specialties.

**AFIMSC. Air Force Installation and Mission Support Center**. One of the centers under AF Materiel Command, the AFIMSC is the single organizational entity in the AF providing intermediate-level installation and mission support capabilities to supported Major Commands (MAJCOMs) and installations across the full range of military operations.

**AFIT. Air Force Institute of Technology**. Located at Wright-Patterson AFB, OH, AFIT is the Air Force's graduate school of engineering and management as well as its institution for technical professional continuing education. A component of Air University and Air Education and Training Command, AFIT is committed to providing defense-focused graduate and professional continuing education and research to sustain the technological supremacy of America's air, space, and cyber forces. AFIT accomplishes this mission through four schools: the Graduate School of Engineering and Management, the School of Systems and Logistics, The Civil Engineer School, and the School of Strategic Force Studies. Through its Civilian Institution Programs Office, AFIT also manages the educational programs of officers enrolled at 350+ civilian universities, research centers, hospitals, and industrial organizations.

**Air Force Job Qualification Standard/Command Job Qualification Standard (AFJQS/CJQS).** A comprehensive task list that describes a particular job type or duty position. Used by supervisors to document task qualifications. The tasks on the AFJQS/CJQS are common to all persons serving in the described duty position.

**AFOCD. Air Force Officer Classification Directory** The official directory for all military officer classification descriptions, codes, and identifiers.

**AFPC. Air Force Personnel Center.** Headquarters Air Force Personnel Center (HQ AFPC) executes and integrates United States Air Force (USAF) personnel programs to develop Air Force people and meet the field commanders' needs. HQ AFPC is a Field Operating Agency (FOA) of Headquarters United States Air Force.

**Air Force Qualification Training Package (AFQTP).** A required instructional package designed for use at the unit to qualify, or aid qualification, in a duty position or program, or on a piece of equipment. AFQTPs identify the Air Forces standardized method for performing the task. The AFQTP may be printed (paper-based), computer-based, in other audiovisual media formats, or all three. If determined by the AFCFM, a paper-based; along with a computer-based product may be needed to satisfy a particular training requirement.

**AFVEC. Air Force Virtual Education Center.** The Air Force's "go-to" site for information about your educational benefits. The site offers a wide range of online services that empowers you to actively take part in all parts of your education-including the ability to create and manage your Tuition Assistance funding requests.

**AT&L. Assistant Secretary of the Air Force (Acquisition, Technology, and Logistics).** The Office of the Assistant Secretary of the Air Force for Acquisition, Technology and Logistics oversees Air Force research, development, acquisition, and program sustainment activities totaling an annual budget in excess of $60 billion for more than 550 acquisition programs.

**AU. Air University**. Located at Maxwell AFB, AL, AU is the Air Force's resident home for Professional Military Education as well as Officer Training School (OTS) and Air Force Reserve

Officer Training Corps (AFROTC) Field Training. In-resident PME programs include Squadron Officer School (SOS), Air Command and Staff College (ACSC), and Air War College (AWC).

**BCE. Base Civil Engineer.** Develops and implements civil engineer force employment and provides staff supervision and technical advice. Performs and manages Civil Engineer functions and activities to provide facilities and infrastructure supporting the United States and allies. Activities include programming, budgeting, project management, drafting, surveying, planning, feasibility studies, construction management, utilities operations, energy and environmental programs, land management, real property accounting, fire protection, explosive ordnance disposal, disaster preparedness programs, family housing and dorm management, and mobilization programs at base level. Serves on response teams and related installation support services. Advises commanders and government officials on effective use of Civil Engineer resources.

**BDE. Basic Developmental Education**. BDE programs are tactical level programs that introduce employees to the Air Force and DoD missions and prepare them for future leadership, managerial, and leadership roles. Key BDE programs include Squadron Officer School (SOS), the Defense Civilian Emerging Leader Program (DCELP) and the Developing Team Leader Course. Program eligibility requirements vary. See the Civil Engineer Career Field Team SharePoint for more information.

**CFETP**. **Career Field Education and Training Plan**. A comprehensive, multipurpose document encapsulating the entire spectrum of training for a career field. It outlines a logical growth plan that includes training resources. The CFETP is designed to make career field training identifiable, eliminate duplication, and ensure the training budget is defensible.

**CFM**. **Career Field Manager**. See Air Force Career Field Manager (AFCFM).

**CFT. Career Field Team.** Functionally oriented teams that execute Force Development policy and programs for civilians.

**Civil Engineer Virtual Learning Center (CE-VLC).** Anytime, anyplace learning within the Civil Engineer Community consisting of instructional modules and skill-level awarding course material specific to the AFSC.

**CD**. **Civilian Development**. The Air Force CD program is central to the Air Force's Civilian Leadership Development continuum that spans a civilian's professional career (see Part II, Section C for a link to the continuum). The programs included in the CD portfolio prepare civilian students from the Air Force, its sister services, and allied nations for positions of greater responsibility. Emphasis in these programs includes leadership, military doctrine and aerospace power. More information about available programs is (here).

**CSLP. Civilian Strategic Leadership Program.** The Air Force civilian enterprise development program designed to provide selected GS-13/14/15 (or equivalent) Air Force employees competencies needed to build a federal corporate culture that drives for results, services customers, and builds successful teams and coalitions within and outside the organization

**CTAP**. **Civilian Tuition Assistance Program**. Air Force civilian post-secondary Tuition Assistance (TA) supports civilians in their continued self-development and includes coursework at the associate, bachelor, masters and doctoral levels. TA is for courses that contribute to occupational and institutional competencies, special interest needs and readiness by supporting the current and anticipated needs of the Air Force. This includes courses that will provide employees the breadth of knowledge and problem-solving tools that aid in critical thinking, allowing individuals to address a wide range of problems and weigh alternative solutions. Additional information about TA and CTAP is available in the AFMAN 36-606, Civilian Career Field Management and Development.

**CL**. **Continuous Learning**. The Office of the Under Secretary of Defense (Acquisition, Technology and Logistics) promotes a philosophy of career-long learning by AT&L workforce members to enhance proficiency and currency. See Part II for CL program application guidance and guidelines for crediting CL activities.

**CONUS/OCONUS. Continental United States/Outside Continental United States.** CONUS refers to United States territory, including the adjacent territorial waters, located within North America between Canada and Mexico. (JP 1)/ Areas outside the 48 contiguous states. Alaska and Hawaii are defined as non-foreign OCONUS.

**Critical Tasks.** Tasks that have been identified by the work center supervisor as having a detrimental effect on mission accomplishment if not performed correctly. Critical tasks may or may not be the same as core tasks but are mandatory if identified as 'critical' to the individual's position by the supervisor or work cent

**Currency**. Maintaining proficiency in the community planning occupational series as demonstrated by meeting DoD and Air Force Continuous Learning (CL) standards and performing acquisition duties. See CL.

**DCOOL**. **Defense Civilian Credentialing Opportunities On-Line**. DCOOL is a website focused on civilian credentialing opportunities for federal workers. The site provides information about certifications and licenses providing professional growth opportunities in their career areas. At the site, civilians can provide both general information on credentialing as well as specific information on credentials related to their individual federal occupational series. After searching on a federal occupational series by either code or title, users can view a list of credentials related to most or some of their job duties. Clicking on a credential title in the list provides detailed information about that credential, including a description of the credential, its eligibility requirements, exam topics, and recertification requirements. The site is available (here).

**DE**. **Developmental Education**. An array of educational opportunities comprised of professional and specialized education programs, research and doctrinal studies, fellowships, and graduate- level studies. DE spans a member's entire career and provides the knowledge and abilities needed to develop, employ, and command air, space and cyberspace forces.

**DAU**. **Defense Acquisition University**. Located at Ft Belvoir, VA, DAU is the Department of Defense's (DoD)'s institutional authority in implementing Defense Acquisition Workforce

Improvement Act (DAWIA) and conferring certification levels. DAU offers a variety of acquisition courses in resident and via Distance Learning.

**(D)BCE. (Deputy) Base Civil Engineer.** This position serves as the Deputy to the Base Civil Engineer at a Department of the Air Force or Joint Base installation with responsibilities for all day-to-day support activities provided by the Squadron to the installation and tenant organizations.

**DL**. **Distance Learning**. Includes Video Tele-seminar (VTS), Video Tele-training (VTT), and Computer Based Training (CBT). Formal courses that a training wing or a contractor develops for export to a field location (in place of resident training) for trainees to complete without the on-site support of the formal school instructor. For instance, courses are offered by Air Force Institute of Technology, Air University, and Training Detachment.

**DT**. **Development Team**. The Civil Engineering career field DT is comprised of civil engineer senior leaders and is led by the Deputy Director of Engineers (AF/A4C-2). The DT meets bi-annually and provides guidance on civilian development plans, provides advice/feedback on policy issues affecting the workforce, provides vectors to workforce members, and endorses candidates for CDE. The DT's mission is to prepare future Air Force Civil Engineering leaders to meet the challenges of shaping the Air Force through appropriate training, education, and experience.

**Duty Position Tasks.** The tasks assigned to an individual for the position currently held. These include as a minimum all core tasks, critical tasks and any other tasks assigned by the supervisor.

**EOC. Emergency Operations Center.** The protected site center where coordination and management decisions are facilitated in the event of an emergency incident. (UFC 4-141-04).

**FA**. **Functional Authority**. FAs are designated general officers or members of the Senior Executive Service (SES) serving as deputy chiefs of staff or assistant secretaries appointed by the Secretary of the Air Force to provide oversight and functional advisory services related to functional communities. The Assistant Deputy Chief of Staff for Logistics, Engineering and Force Protection (AF/A4-2) is the FA for DAF Civil Engineering.

**FM**. **Functional Manager**. Senior leaders, designated by the appropriate functional authority (FA), who provide day-to-day management responsibility over specific functional communities at the MAJCOM, field operating agency (FOA), direct reporting unit (DRU), primary supporting unit (PSU), or air reserve component (ARC) level. While they should maintain an institutional focus regarding resource development and distribution, FMs are responsible for ensuring their teams are equipped, developed, and sustained to meet the functional community's mission as well as encourage force development opportunities in order to meet future needs of the total Air Force mission. The FM for Air Force Civil Engineering is the Deputy Director of Engineers (AF/A4C-2).

**FY**. **Fiscal Year**. For the U.S. Government, the 12- period covering 1 October to 30 September.

**GS. General Schedule.** The General Schedule (GS) classification and pay system covers the majority of civilian white-collar Federal employees (about 1.5 million worldwide) in professional, technical, administrative, and clerical positions. GS classification standards, qualifications, pay structure, and related human resources policies (e.g., general staffing and pay administration policies) are administered by the U.S. Office of Personnel Management (OPM) on a government wide basis. Each agency classifies its GS positions and appoints and pays its GS employees filling those positions following statutory and OPM guidelines.

**IDE**. **Intermediate Development Education**. IDE programs are operational level programs that continue the development and education of mid-career civilians and continue to prepare them to take on increased leadership, managerial, and leadership roles. IDE programs include Air Command and Staff College (ACSC), Executive Leadership Development Program (ELDP), Air Force Legislative Fellows Program (LEGIS), and others. Program eligibility requirements vary. Also see CDE and Part II, Section C for a link to CDE programs.

**IDP**. **Individual Development Plan**. A document used to record short- and long-range career goals, the specific competencies, knowledge, skills, and abilities necessary to meet current objectives, and training, education, and other professional development strategies used to develop the desired competencies. In conjunction with a performance assistance plan, the individual development plan assists in making civilian performance more effective in present and future positions and is used for civilians below the executive level. A template is available (here).

**KCP. Key Career Positions.** Stepping-stones for individuals to gain expertise that may qualify them to move from functional experts to functional leaders.

**MAJCOM**. **Major Command**. The level of command below Headquarters Air Force (HAF) and directly above Numbered Air Forces (NAF). The Air Force is organized on a functional basis in the U.S. and a geographical basis overseas. The functional MAJCOMs are Air Combat Command (ACC), Air Education and Training Command (AETC), Air Force Global Strike Command (AFGSC), Air Force Materiel Command (AFMC), Air Force Reserve Command (AFRC), Air Force Special Operations Command (AFSOC), Air Mobility Command (AMC), and Air National Guard (ANG). The geographic MAJCOMs are U.S. Air Forces in Europe and Air Forces Africa (USAFE) and Pacific Air Forces (PACAF).

**MDP. Master Development Plan.** A comprehensive list of desired education, self-development, training, and typical assignments for each level of the career path.

**OC. Occupational Competencies**. A set of competencies required of all personnel within a specific workforce category (a group of functions requiring similar work, i.e., contracting). They describe technical/functional skills, knowledge, abilities, behaviors, and other characteristics needed to successfully perform that function's mission. A competency identifies behaviors and other attributes and the knowledge, skills, and abilities that define successful job performance. Competencies are important because they are the stepping-stones for civilian development and for the achievement of personnel success and the mission of the Air Force.

**OPM. Office of Personnel Management.** The U.S. Office of Personnel Management (OPM) serves as the chief human resources agency and personnel policy manager for the Federal

Government. OPM provides human resources leadership and support to Federal agencies and helps the Federal workforce achieve their aspirations as they serve the American people. OPM directs human resources and employee management services, administers retirement benefits, manages healthcare and insurance programs, oversees merit-based and inclusive hiring into the civil service, and provides a secure employment process.

**OSD. Office of the Secretary of Defense.** The principal staff element of the Secretary of Defense in the exercise of policy development, planning, resource management, fiscal, and program evaluation responsibilities. OSD includes the offices of the Secretary and Deputy Secretary of Defense, Under Secretaries of Defense, Director of Defense Research and Engineering, Assistant Secretaries of Defense, General Counsel, Director of Operational Test and Evaluation, Assistants to the Secretary of Defense, Director of Administration and Management, and such other staff offices as the Secretary establishes to assist in carrying out assigned responsibilities.

**PME. Professional Military Education.** Critical subset of developmental education that: 1) provides the nation with personnel skilled in the employment of air, space, and cyberspace power in the conduct of war, small scale contingencies, deterrence, peacetime operations, and national security; 2) provides DAF personnel with the skills and knowledge to make sound decisions in progressively more demanding leadership positions within the national security environment; and 3) develops strategic thinkers, planners, and war fighters. In addition, professional military education programs strengthen the ability and skills of DAF personnel to lead, manage, and supervise.

**PMP. Project Management Professional.** Project Management Professional is an internationally recognized professional designation offered by the Project Management Institute.

**RC. Reserve Component.** The Armed Forces of the United States Reserve Component consists of the Army National Guard of the United States, the Army Reserve, the Navy Reserve, the Marine Corps Reserve, the Air National Guard of the United States, the Air Force Reserve, and the Coast Guard Reserve.

**SAF/IEE. The Deputy Assistant Secretary for Environment, Safety and Infrastructure.** SAF/IEE is responsible for all matters pertaining to DAF built and natural infrastructure. This includes the life cycle management of real property interests, real property and facilities (including utilities) for planning, programming, acquisition, sustainability, utilization, and disposal to include any associated portfolio management of real property transactions; maintenance, repair and operation of all facilities, utilities, and land; military construction; privatization of utilities, military family housing, or other facilities or real property improvements; joint military-civil airfield usage; changes in legislative jurisdiction of Air Force Assistant Secretary for Installations, Environment and Energy (SAF/IE) Deputy Assistant Secretary for Installations (SAF/IEI) Deputy Assistant Secretary for Energy (SAF/IEN) Deputy Assistant Secretary for Environment, Safety, and Infrastructure (SAF/IEE)23 HAFMD1-18 10 JULY 2014 real property; and annexation of installations by municipalities. SAF/IEE, working with AF/A7C, has specially arranged lines of authority to and oversight of the Installations Directorate within the Air Force Civil Engineer Center (AFCEC), a field operating agency of AF/A4/7, that is responsible for executing and managing DAF real property acquisitions and disposals,

providing corporate level portfolio management for DAF property. Except for EIAP, SAF/IEE is also responsible for all matters pertaining to DAF environment, safety, occupational health, radiation safety and radioactive materials management interests. This includes the planning, programming, implementation, operations, management, and interagency/intergovernmental coordination for all DAF programs, projects and activities subject to environmental, safety, occupational health, radiation safety and radioactive materials management requirements in law, regulation, international agreements, executive orders, DoD directives, instructions and policy, DAF policy directives, instructions and policy, and special agreements. SAF/IEE interfaces with outside organizations on matters concerning DAF -wide environment, safety, occupational health and built/natural infrastructure matters.

**SCPD. Standard Core Personnel Documents.** A single core personnel document used for several like positions across the DAF issued by AFPC. SCPDs eliminate duplication of effort in composing individual job descriptions and eliminate confusion arising from variations in phraseology that do not represent variations in substance. Use of SCPDs are mandatory, with minor edits possible.

**SDE. Senior Developmental Education.** SDE programs are strategic level programs that provide for the deliberate development of senior civilian leaders. These programs provide a more strategic perspective that will prepare senior civilians to lead organization and programs to achieve results in the Joint, inter-agency and multi-national environments. SDE programs include Defense Senior Leader Development Program (DSLDP), Air War College (AWC), The Dwight D. Eisenhower School for National Security and Resource Strategy, and others. Program eligibility requirements vary. Also, see CDE.

**SES. Senior Executive Service.** The Senior Executive Service (SES) lead America's workforce. As the keystone of the Civil Service Reform Act of 1978, the SES was established to "...ensure that the executive management of the Government of the United States is responsive to the needs, policies, and goals of the Nation and otherwise is of the highest quality." These leaders possess well-honed executive skills and share a broad perspective on government and a public service commitment that is grounded in the Constitution. Members of the SES serve in the key positions just below the top Presidential appointees. SES members are the major link between these appointees and the rest of the Federal workforce. They operate and oversee nearly every government activity in approximately 75 Federal agencies. The U.S. Office of Personnel Management (OPM) manages the overall Federal executive personnel program, providing the day-to-day oversight and assistance to agencies as they develop, select, and manage their Federal executives.

**SME. Subject Matter Expert.** A subject matter expert has a unique blend of experience, education, and training to be an authority in their respective field of expertise.

**SMS. Subject Matter Specialist.** A subject matter specialist excels in various components within their engineering discipline and provides advice to leadership on course of actions required to sustain facilities or infrastructure.

**TA. Tuition Assistance.** Financial assistance for tuition, laboratory and other instructional fees for academic mission-related courses at accredited post-secondary academic institutions.

**The Civil Engineer School (TCES).** The Civil Engineer School is one of four schools within the Air Force Institute of Technology, located at Wright-Patterson AFB, OH. The Civil Engineer School provides professional continuing education to Civil Engineers. Course list is available (here).

# Appendix B: Training Courses and Resource Index

## Introduction to Training Course and Resource Index

This section includes a list of formal training requirements for 0802, 0809, and 0817 as they progress through their careers. It is expected that Engineering Technical, Construction Control, and Survey Technical personnel will continue learning in their respective fields. This index is not all inclusive and is a general guide to assist in career goals. A comprehensive list of courses can be found through MyPers, with access to AFIT, DAU, CDE, and MyVector course catalogs. Additional sources include professional organizations. Career paths generally align with base level, AFCEC PM/SME, HHQ PM, or executive leadership roles at the command, AFCEC, HAF or SAF levels; Engineering Technical, Construction Control, and Survey Technical can use the Individual Development Plan in Appendix C or MyVector to establish goals and training required to achieve those goals. The Individual Development Plan should be a living document that you revise as you advance in your career or change short/long range goals. Course availability at TCES changes annually and should be reviewed for currency when developing an IDP or when annual updates are made.

| **Basic Skills & Knowledge** | |
|---|---|
| **Course Title** | **Description** |
| **Air Force Culture / Organizational Leadership** | New employee orientation |
| **WGMT 100** | Air Force Civil Engineer Basic Civilian Course |
| **WGMT 101** | WMGT 101<br>Air Force Civil Engineer Basic Course |
| **0802 Engineering Technician** | |
| **Course Title** | **Description** |
| **J9AQA3E531 00AD** | Manual and computer aided drafting |
| **WENG 519** | AF Installation Planning Principles |
| **WENG 520** | Comprehensive Planning and Development |
| **WMGT 436** | Requirements and Optimization |
| **0809 Construction Control** | |
| **Course Title** | **Description** |
| **J7AZT3E571 01AA** | Contract Construction Inspector Advanced (MTT) |
| **JCACP3E571 01AB** | Air Force planning, engineering design, soil classification, field identification & soils exploration, and evaluation of materials testing procedures and reports. |
| **WENG 200** | Scoping and Estimating for SABER program managers and Requirements and Optimization personnel |

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| **WENG 400** | Life-Cycle Cost Estimating: Covers drawing reading and Class 5 to Class 1 cost estimating applications and processes; required in order to obtain a PACES license and AFI |
| **WENG 500** | Cost Engineering. Comprehend and implement Tri-Service policy and analyze cost estimates to more effectively plan, program, budget, and execute Air Force infrastructure requirements |
| **WENG 519** | AF Installation Planning Principles |
| **WENG 555** | Airfield Pavement Construction Inspection |
| **WMGT 421** | Contracting for Civil Engineering. Acquisition Management. Understand the DoD systems acquisition process, to include the joint capabilities integration and development system, the planning, programming, budgeting and execution process, DoD 5000- series policy documents, and current issues in systems acquisition |

## 0817 Survey Technical

| Course Title | Description |
|---|---|
| **JCAQP3E531 00A** | Fundamentals of surveying, data collection, survey planning, expedient surveying, construction surveying, vertical control, horizontal control, topographic surveying, road stakeout, and building and utility stakeout, using conventional (optical) and Global Positioning System (GPS) methods, and mishap survey. |
| **JCAZP3E571 01AA** | Survey introduction, reconnaissance, vertical control, horizontal control, topography, road design & layout, building layout, and utility layout. This course utilizes optical, automated and global positing system surveying equipment. Students will collect, convert, and present field survey data for civil projects utilizing Trimble Business Center (TBC) software. (myLearning) |
| **Optical Surveying Qualification Training Course** | Learn to setup and utilize optical surveying equipment, configure and utilize data collection equipment, complete and maintain survey field notes, measure and compute horizontal angles, measure and compute vertical angles, measure and compute horizontal and vertical distances, establish horizontal and vertical control, perform topographic survey, process survey data using a civil software package and perform and compute indirect/remote measurements. (myLearning) |
| **Mishap Survey** | Familiarization on planning, performing, and documenting various types of mishap surveys. |

## Leadership Skills & Knowledge

| Course Title | Description |
|---|---|
| **New Supervisor Course** | Focus on hiring principles and authorities/workplace management, labor management relations/civilian personnel fundamentals, performance management/workforce incentives, and employee engagement/handling unacceptable performance. Required for all first-time supervisors of civilians within one year of appointment |
| **USAF Military Personnel Management Course** | First level supervisors of AF military personnel learn about the military airman (military standards, discipline, the role of JAG/First Sergeant, Benefits), Career Management (evaluations, promotions, assignments and retention), and AF education and training. |
| **Experienced Supervisor Course (ESC)** | Understand fundamentals in Labor Management Relations, Employee Management Relations, Staffing/Hiring, Performance Management, and Handling Unacceptable Performance. Attend supervisory refresher training at least once every three years available via the AF Portal |

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| **WMGT 436** | Requirements & Optimization. Comprehend the roles and responsibilities of the CEOE Requirements & Optimization section and sub activity managers for effective and efficient mission support. |

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| **AFIMSC Installation Health Assessment Data Analytics and Collaboration Site** | https://cs2.eis.af.mil/sites/13298/iha/SitePages/Home.aspx<br>Training available for IHA Tools. |
| **Developing Team Leader Course (DTLC)** | https://mypers.af.mil/app/answers/detail/a_id/33633<br>https://www.airuniversity.af.edu/Eaker-Center/DAFCS/Leadership-Development/ |
| **Other AF – Sponsored Training Resources cont'd** | |
| **Engineering Schoolhouse** | https://home.army.mil/wood/index.php/units-tenants/usaf/AF#qt0:2 |
| **Emerging Leader Course** | https://www.airuniversity.af.edu<br>32-hour elective course to develop interpersonal communication and leadership skills for AF civilians pursuing future leadership roles. |
| **Professional Military Education** | https://www.airuniversity.af.edu/ACSC<br>Squadron Officer School, Air Command and Staff College, and Air War College via distance learning are available from Air University. |
| **Virtual Force Development Center** | https://www.my.af.mil/ |
| **Full list of DE/Non-DE, PME/Academic & Fellowships /Leadership Seminars** | https://cs2.eis.af.mil/sites/10016/CE%20FAC%20Workspace/Shared%20Documents/01%20Marc h%202019%20CE%20Summit/CDE%20Cheatsheet.xlsx |
| **Naval Civil Engineer Corps Officers School Courses** | https://www.public.navy.mil/netc/centers/csfe/cecos/About.aspx<br>https://www.public.navy.mil/netc/centers/csfe/cecos/Registration.aspx |
| **US Army Corps of Engineers Learning Center** | http://ulc.usace.army.mil<br>Course Schedule: https://ulc.usace.army.mil/CrsSchedule.aspx |
| **Whole Building Design Guide** | https://www.wbdg.org/continuing-education<br>Distance learning courses offering continuing education credit. |
| **Commercially Available Training / Professional Organizations** | |
| **Society of American Military Engineers** | https://www.same.org/<br>Professional Organization with Training Opportunities |
| **American Society of Civil Engineers** | https://www.asce.org/continuing-education/<br>Information on Professional Certification and Free Training |
| **National Society of Professional Engineers** | https://www.nspe.org/resources/pe-institute<br>The PE Institute has a catalog of live educational events, webinars, and conferences for the professional engineer. As engineering disciplines become more specialized, continuing education becomes more crucial to managing a rising career. Online webinars and conferences can help PEs stay current on a variety of topics. All events provided by NSPE, its state societies, and partners are available to members at a discount. |

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| **RedVector** | https://www.redvector.com |
| **Supervisor Resources** | |
| **DAU** | https://www.dau.edu/ |
| **myLearning** | https://lms-jets.cce.af.mil/moodle/ |

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|---|---|
| **AF e-Learning** | https://www.my.af.mil<br>Free online resources for supervisors, to include training on time management<br>Time Management course: https://usafprod.skillport.com/skillportfe/main.action |
| **AF Portal** | Log in to AF.mil then copy and paste the following links:<br><br>Mandatory Courses for supervisors are listed but check website for the most up to date list of mandatory courses.<br><br>https://www.my.af.mil/gcss-af/USAF/ep/contentView.do?contentType=EDITORIAL&contentId=c330D98A15BC6E686015BEE402F270227&channelPageId=s0ECF2BB84DBE AE7B014DD46E712201EF&programId=tE3494DD0504287C101504334D7B20048<br><br>Orientation Course:<br>USAF New Supervisor:<br><br>Supervisory & Managerial Development Portfolio:<br>USAF Experienced Supervisor Military Personnel<br>Manager Course USAF New Manager<br>USAF Experienced Manager<br><br>Leadership Development Portfolio:<br>https://www.my.af.mil/gcss-af/USAF/ep/contentView.do?contentType=EDITORIAL&contentId=c330D98A15BC6E686015BEE3A85810225&channelPageId=s0ECF2BB84DBEAE7 B014DD46E712201EF&programId=tE3494DD0504287C101504334D7B20048<br><br>Virtual Force Development Center:<br>https://www.my.af.mil/gcss-af/USAF/ep/browse.do?programId=tE3494DD0504287C101504334D7B20048&channelPageId=s0ECF2BB84DBEAE7B014DD46E712201EF |
| **Air University Air Force Negotiation Center** | www.airuniversity.af.edu/AFNC |

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|---|---|
| **Air University Press** | http://aupress.maxwell.af.mil/bookinfo.asp?bid=497<br>General Lorenz on Leadership, Lessons on Effectively Leading People, Teams, and Organizations. Book available on Air University website. |

| **Supervisor Resources cont'd** | |
|---|---|
| **Employee Assistance Program** | https://foh.psc.gov/fohservices/bhs/management.html<br><br>Counselors available to work with supervisors, managers and union representatives to help engage with employees on productivity concerns. Coaching resources available.<br><br>Employee Assistance Program Supervisor's Guide: https://www.shaw.af.mil/Portals/98/Civilian%20Employee/Supervisor%20 Guide%20EAP.pdf<br><br>Work Life Training and Federal Occupational Health Website: https://foh.psc.gov/fohservices/bhs/campaigns.html<br><br>Multiple webinars available to share with employees such as pre-retirement prep, overcoming depression, making life work for you, safeguard your personal security, life changes, optimizing output, safeguarding your financial future, calming your concerns, communicating with clarify, the power of being present. |
| **National Defense University** | https://www.ndu.edu/ |
| **National Intelligence University** | http://ni-u.edu/wp/leadership-and- management/ |
| **Office of Personnel Management (OPM)** | OPM's Center for Leadership Development: https://www.opm.gov/services-for-agencies/center-for-leadership- development/about-us/#url=Courses-and-Programs<br>Helps training officers, managers and supervisors meet the challenge of succession management. Helps future leaders assess leadership effectiveness, gain core knowledge and develop critical skills. (Current course schedule: https://leadership.opm.gov/courses.aspx)<br><br>LEAD Certification Program: https://cldcentral.usalearning.net/mod/page/view.php?id=249<br><br>OPM's Federal Leadership Development Program: https://www.opm.gov/services-for-agencies/federal-leadership- development-programs/<br>Catalog of hundreds of Federal leader development programs available through Federal agencies across the government.<br><br>OPM Federal Managerial Training Framework: https://www.opm.gov/wiki/uploads/docs/Wiki/OPM/training/Complete%2050 8-%20Frameworks%2C%20Fact%20Sheet%2C%20learning%20objectives%2C%20and%20additional%20resources.pdf<br>Outlines mandatory training and recommended training for supervisors.<br><br>OPM Training and Development Policy Wiki: https://www.opm.gov/WIKI/training/Individual-Development-Plans.ashx Information for supervisors on Individual Development Plans |

| Supervisor Resources cont'd | |
|---|---|
| **Treasury Executive Institute** | https://home.tei.treasury.gov/<br>Offers online and in-person leadership courses and coaching GS14-SES or equivalent |
| **Miscellaneous Resources** | |
| **Career Development and Progression Resources** | |
| **CE Career Field Team (CFT) SharePoint** | https://cs2.eis.af.mil/sites/10016/default.aspx<br>Includes information on Civilian Development Education, Tuition Assistance, Recruitment/Retention, the Key Career Position Program, Mentoring/Vectoring, Policies, Memos and Guidance, Acquisition Coding, etc.<br><br>Questions: contact the Civil Engineer CFT at afpc.ce.cft@us.af.mil or DSN 665-2666/COMM 210-565-2666 |
| **CE Civilian Career Field Page** | https://usaf.dps.mil/teams/10041/gscareerfield/Pages/default.asps |
| **eOPF** | https://eopf.opm.gov<br>View Your Electronic Official Personnel File |
| **Individual Development Plan Resource Guide** | https://www.airman.af.mil/Portals/17/002 All Products/004 Benchmarks/004_OrganizationsInputs/AMC/AMC_Individual_Development_Plan_Resource_Guide_v4.pdf?ver=2016-07-01-112805-277 |
| **MyBiz** | https://compo.dcpds.cpms.osd.mil/<br>Database for civilians that includes career brief with information on duty history, previous education and training |
| **myPers Civilian Force Development Home Page** | https://mypers.af.mil/app/home<br><br>Force Development:<br>https://mypers.af.mil/app/categories/c/549/p/2/<br><br>Discussion forums and links to online resources, to include books and courses<br><br>Annual CDE Nomination Data Call:<br>https://mypers.af.mil/app/categories/c/549/p/2/ |
| **MyVector** | https://myvector.us.af.mil<br>Build resume in MyVector<br>CDE applications, Info on Civilian Strategic Leader Program<br>Discussion forums, links to online books<br>Air Force Competencies<br>Information on mentoring, career planning and more |

| Certification Programs | |
|---|---|
| **Certified Survey Technician** | https://cstnsps.com/ |
| **Certified Construction Manager** | https://www.cmaanet.org/certification |
| **Project Management Professional (PMP)** | https://www.pmi.org/certifications/become-a-project-manager/pmp# |
| **Construction Manager Certification** | https://aic-builds.org/certifications/ |
| **Construction and Building Inspector Certification (Commercial/Residential)** | https://www.iccsafe.org/certification-exam-catalog/ |
| **Plans Examiner Certification, International Code Council (ICC)** | https://www.iccsafe.org/certification-exam-catalog/ |
| **Concrete/Aggregate Field/Laboratory Technician, American Concrete Institute (ACI)** | https://www.concrete.org/certification/certificationprograms/m/details/pgm/laboratory%20concrete%20testing&cert=concrete%20laboratory%20testing%20technician%20-%20level%201 |
| **Construction Materials Testing Certification, National Institute for Certification in Engineering Technologies (NICET)** | https://www.nicet.org/certification-programs/civil-engineering/asphalt-concrete-soils/construction-materials-testing-concrete/ |
| **Geographic Information System Professional (GISP), Geographic Information System Certification Institute (GISCI)** | https://www.gisci.org/ |

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| **National Geospatial-Intelligence Agency (NGA) GEOINT Professional Certification** | https://www.nga.mil/resources/GEOINT_Professional_Certification.html |

## Appendix C: Individual Development Plan

| INDIVIDUAL DEVELOPMENT PLAN | | | | | |
|---|---|---|---|---|---|
| Employee Name | Series | Grade | Position Title | Organizational Element | Supervisor's Name |
| | | | | | |
| **Section I - CAREER GOALS** | | | | | |
| *Short-Term Goals (1-2 Years)* | | | *Long-Term Goals (2-5 years)* | | |
| **Section II - INDIVIDUAL DEVELOPMENT PLAN** (Completed by Supervisor & Employee) | | | | | |
| Competencies (KSAs) needed to reach goal | | Developmental Assignments, etc., including target completion dates. | | Other Activities | |
| | | | | | |

| INDIVIDUAL DEVELOPMENT PLAN | | | | |
|---|---|---|---|---|
| **Section III - Training and Accomplishment Schedule** | | | | |
| Remarks | Formal Training (e.g., interagency, out-of- agency, private sector, correspondence, etc.) | Projected Cost | Target Completed Date | Actual Completed Date |
| | | | | |
| Remarks | Continuing Education | Projected Cost | Target Completed Date | Actual Completed Date |
| | | | | |
| Remarks | Training for Acquisition Coded Positions | Projected Cost | Target Completed Date | Actual Completed Date |
| | | | | |
| Employee's signature<br>Date | Employee's Supervisor's signature<br>Date | Note: This IDP is subject to change depending on availability of funds, courses, and candidate's requirements. | | |

# Appendix D: References

| References | |
|---|---|
| **Number** | **Title** |
| **AFI 36-130** | *Civilian Career and Developmental Programs* https://static.e-publishing.af.mil/production/1/af_a1/publication/afi36- 130/afi36-130.pdf |
| **DAFI 36-2670** | *Total Force Development* https://static.e-publishing.af.mil/production/1/af_a1/publication/dafi36-2670/dafi36-2670.pdf |
| **DODI1400.25V451_AFI36-1004** | *Civilian Recognition Program* https://static.e-publishing.af.mil/production/1/af_a1/publication/dodi1400.25v451_afi36-1004/dodi1400.25v451_afi36-1004.pdf |
| **AFH 36-2643** | *Air Force Mentoring Program* https://static.e-publishing.af.mil/production/1/af_a1/publication/afh36-2643/afh36-2643.pdf |
| **AFI 36-2639** | *Education With Industry Program* https://static.e-publishing.af.mil/production/1/saf_aq/publication/afi36-2639/afi36-2639.pdf |
| **DAFMAN 36-142** | *Civilian Career Field Management and Development https://static.e-publishing.af.mil/production/1/af_a1/publication/dafman36-142/dafman36-142.pdf* |
| **AFPD 36-26** | *Total Force Development* https://static.e-publishing.af.mil/production/1/af_a1/publication/afpd36-26/afpd36-26.pdf |
| **JP 2-03** | *Geospatial Intelligence* https://fas.org/irp/doddir/dod/jp2_03.pdf |
| **JP 3-34** | *Joint Engineer Operations https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3_34.pdf* |
| **DODI 8130.01** | *Installation Geospatial Information & Services https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/813001p.pdf?ver=2020-08-04-150954-553* |