Engineer Branch

1. Introduction

a. Purpose/mission of the Engineer Regiment. The Engineer Regiment is a sub-profession within the profession of arms. It is a body of people with a passion for serving as an engineer Soldier who embodies the Warrior Ethos and a technical set of skills. These technical skills set the Engineer Regiment apart via its unique services and knowledge that the Army needs to accomplish its missions. The purpose of the Engineer Regiment and its role within the US Army is to build a tactically and technically competent Regiment with leaders of character that serve commanders with a commitment to overcome any challenge and enable the success of the team's mission.

b. Proponent information. The Engineer Regiment's proponent is the US Army Engineer School (USAES), Fort Leonard Wood, MO. Personnel may find contact information for all agencies and directorates on the public Web page at http://www.wood.army.mil/usaes/. Those individuals with a valid AKO account or ".mil" enterprise account may find more refined information on the Engineer School Knowledge Network from this website. Support for proponent functions is provided to the commandant of the US Army Engineer School by the CG, US Army Corps of Engineers (USACE), 441 G Street, Washington, DC 20314–1000 and the Commander, Installation Management Command, 2405 Gun Shed Road, Fort Sam Houston, TX 78234–1223.

c. Functions.

(1) Terms

(a) The Engineer Regiment. The Engineer Regiment represents the Army's engineer capabilities across the operating force, generating force, and US Army Corps of Engineers. The Engineer Regiment consists of both active and reserve components of the Army, engineer organizations (as well as DOD civilians, affiliated contractors and agencies within the civilian community) with a diverse range of capabilities focused on supporting the Army and its mission.

(b) The Active Component. The Engineer Regiment's Active Component (AC) consists of engineer units within US Forces Command (FORSCOM), Army Service Component Commands (ASCC), Trainingand Doctrine Command (TRADOC), USACE, and non-engineer organizations, including the National Geospatial-Intelligence Agency and Directorates of Public Works in Installation Management Command.

(c) The Reserve Component. The Reserve Component (RC) of the Engineer Regiment consists of the Army Reserve and the Army National Guard and constitutes more than three-fourths of Army engineer forces. The Engineer Regiment's RC includes a wide range of specialized units, including combat, construction, and geospatial capabilities.

(d) The Engineer Branch. The Engineer Branch includes both the Human Resource (HR) managers in HRC and the Engineer Branch proponent (USAES) under TRADOC. Together they train, develop, and employ the centerpiece of those forces conducting engineer operations - engineer Soldiers. The branch trains, educates, and develops engineer Soldiers in various military occupational specialties and skills.

(e) The US Army Corps of Engineers. The USACE is the Army's direct report unit assigned responsibility to execute Army and DOD military construction, real estate acquisition, development of the nation's infrastructure and water resources management through the Civil Works Program. USACE serves the Armed Forces and the nation by providing vital engineering services and capabilities, as a public service, across the full spectrum of operations, from peace to war, supporting national interests.

(2) Support.

(a) Lines of engineer support. The Engineer Regiment's unique capabilities are combined along four lines of engineer support to assure mobility, enhance protection, enable force projection & logistics, and build partner capacity and infrastructure to provide freedom of action to ground forces at every echelon executing unified land operations. Engineers provide support to Army and joint force staffs at all levels, installations, and the nation at the tactical, operational, and strategic levels. By its very nature, the Engineer Regiment is broad with many diverse developmental opportunities.

(b) Joint, interagency, intergovernmental, and multinational. The Engineer Regiment is joint in its integration capabilities. It supports the planning, preparation, execution, and assessment of joint operations by complementing and augmenting US Navy SEABEE units, US Air Force REDHORSE and PRIME BEEF units, and host nation engineer capabilities. The Regiment provides interagency support and leverages non-military and non-governmental engineer assets to support mission accomplishment. It is capable of supporting or leading multinational engineer efforts.

2. Officer Characteristics Required

a. Characteristics required of all officers. The Army expects all officers to possess the base characteristics to develop into agile and adaptive leaders for the 21st century. Our leaders must be grounded in Army Values and the Warrior Ethos, competent in their core proficiencies, and broadly experienced to operate across the range of military operations. All officers must be physically and mentally fit, maintain and display self-control, remain calm under pressure, and adhere to published standards and regulations. They must operate in Joint Intergovernmental Interagency Multinational (JIIM) environments and leverage capabilities beyond the Army in achieving their objectives. The Army Values and attributes set the basis for leader character - what a leader must be. The Soldiers Creed and skills developed by leaders establish their competence - what a leader must know. The actions that leaders conduct and execute constitute leadership - what a leader must do. This leadership framework describes a leader of character and competence who achieves excellence across the full range of military operations. Explanation of these characteristics can be found in ADP 3-0 & FM 6-22.

b. Unique knowledge and skills of an Engineer officer. The Engineer Regiment requires officers who are tactically and technically competent and committed to overcoming all challenges to the successof the team's mission. Additionally, officers continuously update their education and professional certifications because of many engineer assignments' technical nature. Engineer officers with an Accreditation Board of Engineering and Technology (ABET) accredited engineering degree should seek to become licensed as a Professional Engineer and obtain a master's degree in engineering or other mission-related fields. Officers with degrees in architecture or environmental design are encouraged to obtain a National Architectural Accrediting Board (NAAB) accredited master's degree in architecture (if their undergraduate degree is not NAAB accredited) and should seek to become licensed as Registered Architects. Engineer officers who have degrees in other mission-related disciplines such as geology, planning, construction management, and landscape architecture should also seek to become licensed orcertified in their profession. Without a mission-related undergraduate degree, engineer officers should seek to obtain a master's degree in an engineering or mission-related discipline. All engineer officers are highly encouraged to seek a professional certification relevant to the Engineer mission, such as Project Management Professional (PMP), Certified Construction Manager, or Leadership in Energy and Environmental Design Accredited-Professional. To add the best value possible to the Army and the nation, engineer officers must be lifelong learners who are experts in the technical and tactical domains across the full range of military engineering. They gain competency through a logical sequence of institutional training and education, experience gained in operational assignments, and continuous self-development initiatives. The Army classifies Engineer officers into a single AOC 12A. Engineer lieutenants and captains develop core technical competencies through attendance at the basic and career course. Several branch-unique skills require further professional development and qualification by completing functional courses, self- development, and operational experience. The Engineer Branch uses skill identifiers (SIs) to classify officers and code unit positions that require the skills, to provide commanders with engineer leaders who have the right skills for the job. Engineer officers obtain various SIs throughout their career to increase their value to the Army, their depth of expertise in applied engineering, their mastery of leveraging combinations of the three engineer capabilities, and the types of units/positions they may serve. An engineer officer with broader skills has more flexibility in being assigned to key and developmental (KD) and developmental/broadening positions. The Engineer Branch has proponency for the following skills (detailed descriptions contained in DA

Pam 611–21):

- S4—Sapper Leader
- W1—Facilities Planner
- W2—Geospatial Engineer Officer
- W3—Professional Engineer
- W4—Degreed Engineer
- W5—Project Management Professional
- W6—Project Engineer
- W7—Environmental Officer
- W8—Facility Engineer

3. Officer development

a. Officer development model. The officer development model focuses on the quality and range of experience rather than the specific gates or assignments required to progress.

(1) Initial entry officers gain engineer technical and tactical skills to develop a Warrior Ethos and gain significant leadership experience. During these company-grade assignments, officers gain a critical tactical understanding that engineers are part of the joint and combined arms team and technical experience in combat engineering, geospatial engineering, and construction management. They begin to develop combined arms competency that allows them to lead combined arms formations during large-scale combat operations in multi-domain operations.

(2) Throughout an officer's career, the Army's officer development model highlights the need to gain JIIM experience and exposure. The breadth of tactical and technical assignments within the Engineer Regiment provides officers with JIIM developmental and broadening opportunities. These opportunities occur at installations and contingency environments to increase technical competency expected by field and garrison commanders.

(3) For broadening opportunities, officers should view the concept of broadening as a purposeful expansion of a leader's capabilities and understanding provided through opportunities internal and external to the Army. Broadening occurs throughout an officer's career. Officers gain experiences and education in different organizational cultures and environments, resulting in a leader who can operate up to and including the strategic level in complex environments. A broadening assignment intends to develop an officer's capability to see, work, learn, and contribute outside their perspective or individual level of understanding to better the individual officer and the institution. Broadening provides a continuum of leadership capability at direct, operational, and strategic levels, which bridges diverse environments and organizational cultures. The broadening process is dynamic and variable across cohorts, grades, and branches or functional areas (FAs). Opportunities change in response to the Army's emerging missions, evolving structure, and professional culture. Deliberate career management that carefully limits KD time to prescribed intervals, allowing exceptions only under limited extenuating circumstances, is fundamental to the concept of broadening. Broadening opportunities may vary in scope, responsibility, and developmental outcomes and typically fall into four major categories listed below.

(4) Develops competencies inside or outside of the Engineer Regiment. The AC groups interrelated branches and FAs into officer management categories called functional categories and functional groups. The functional designation process determines which specialty officers continue their development, either in their accession branch or in a different FA Management of officer development in functional categories recognizes the need to balance the officer corps' specialization with officers' inherent requirement to gain more breadth in an increasingly complex environment. Officers have reoccurring opportunities after the 4th year of officer service to transfer to a different branch or FA. The process is known as the Voluntary Transfer Incentive Program (VTIP), and HRC manages the process to balance inventories with Army requirements and leverage individual officer preferences and demonstrated abilities. HRC conducts VTIP panels quarterly and announces participation via MILPER message describing procedures and specialties considered. VTIP allows

HRC to identify and target officers with critical skills early in their development, allowing them to obtain additional training and experience to bring those skills to bear as quickly as possible. The VTIP panel intends to fill requirements and provide the FAs enough time to send their officers to school and training before utilization. The VTIP process aligns Army's needs for future field grade officer requirements in each functional category. Each functional category has its unique characteristics and development model for officers, reflecting the Army's readiness requirements. HRC assigns Functional Officers across the Army in TOE and TDA organizations.

(5) Provides an experience with civilian industry or within a community of students, scholars, and instructors at institutes of higher learning where the officer can gain new perspectives and knowledge, skills, and abilities not generally obtained from organic experiences, training, or education. Lifelong learning, supported by both civilian and military education and professional societies and associations, is necessary for engineer officers to become technically competent in combat, general, geospatial engineering, and construction management, as well as joint and expeditionary operations. While the Army provides support, engineer officers must be self-motivated to achieve lifelong learning.

(6) The paragraphs below represent a career guide by defining those professional development opportunities available at each rank that prepare the engineer officer for further service at the next higher rank. It presumes a heavy focus on tactical/maneuver support operations for company-grade officers, transitioning to a combined/joint operational focus coupled with varied technical requirements for senior company grade and field grade officers. A constant theme throughout the career guide is the increased use of the self-development domain to produce technically and tactically competent leaders for the Army.

b. General career development. Engineer officer career development includes training, education, self-development, and KD assignments. The three domains of leader development – Professional Military Education (PME)/functional training, operational assignments, and self-development – define and engage a continuous cycle of education, training, selection, experience, assessment, feedback, reinforcement, and evaluation to encourage officer development throughout career progression. The emphasis within each domain of leader development shifts throughout an officer's career to meet the Army's operational needs in the continuum of competition and conflict. The AC Army engineer officer career map is in figure 1.

(1) Professional military education. The institutional Army (schools and training centers) is the foundation for lifelong learning.

(2) Operational assignments. Upon completion of institutional training, ideally, leaders transition to operational assignments. This operational experience allows them to use, hone, and build on what they learned through the formal education process. Knowledge gained through on-the-job training in various challenging assignments and additional duties prepares officers to lead and train Soldiers for combat. The officer's breadth and depth of experience are the metrics that accurately reflect the potential for promotion and service in positions of increased responsibility. Assignments that increase officers' overall technical and tactical knowledge and improve their understanding of combined, joint, interagency, and multinational operations help broaden the skill sets that make them more effective combat leaders.

(3) Self-development. Leaders must commit to a lifetime of professional and personal growth to stay at their profession's cutting edge. This begins in the institutional Army with the Athena Assessments and the development of an Individual Deployment Plan. Every officer is ultimately responsible for their individual development plan. Critical elements of a leader's self- development program should include written, oral, self-cultural, language, and JIIM environments. Officers should set self-development goals and explore opportunities to serve in JIIM environments throughout their careers to expand their overall knowledge base and increase their ability to lead in those environments. Officers should concentrate their efforts on attaining and honing a broad set of skills by holding KD positions that allow them to explore various aspects of their professional abilities.

(4) Skill identifier. Skill identifiers support career development, officer tracking, and management of assignments to develop multi-skilled Engineer officers to meet the Army's needs and the officer's

goals. The Army expects the management and assignment of officers based on the officer's SI's and coded positions. An officer selects which skills training meets their personal developmental goals and the technical focus they would like to have in their career. Skills training and classification allow the Army to fill coded positions with officers with the right mixture of skills.

(a) Engineer officers should obtain at least one SI and are encouraged to obtain several SIs to broaden their technical engineer competence and use in the Army.

(b) To support assigned unit missions, engineer officers selected to serve in positions coded with engineer SIs should complete the required training before being assigned to these positions.

(c) Engineer officers must complete their KD operational assignment and schooling to be best qualified at each grade and exceptionally qualified for future promotions.

c. Lieutenant development.

(1) Education. Engineer lieutenants must graduate from the Engineer Basic Officer Leaders Course (EBOLC) to ensure a strong foundation in officer common core/leadership training and military-specific engineer training. It is this strong foundation that allows for continued leader development in the operational and self-developmental domains. The Engineer Branch desires the following certifications skills to further the development of engineer lieutenants. Those selected skill identifiers are: (S4) Sapper, (5R) Ranger, (5P) Airborne, (3X) Bradley Leader Course, (R4) Stryker Leaders Course, (W4) Degreed Engineer, (W2) Geospatial Engineer Officer.

(2) Assignment.

(a) KD (12–24 months) assignment as a platoon leader is critical for an engineer lieutenant for a minimum of 12 months.

(b) The following assignments for lieutenants are examples of developmental/broadening opportunities. A mixture of these assignments provides company-grade officers with technical experience and the opportunity to lead, train, and support small units. These positions of higher responsibility and breadth are the foundation critical to continued growth as an engineer officer.

- Company XO
- TRADOC IMT Platoon Leader
- Aide de Camp
- ENSOF Assist. Group Engineers/Assist. Command Engineers/Assist. Ranger BN EN
- USACE Project Engineer or Project Manager
- Geospatial Engineer
- Task Force Engineer
- Battalion Staff Officer

(3) Self-development. Numerous opportunities exist for self-development at the lieutenant level. Officers who have an ABET accredited engineering degree are highly encouraged to take the Fundamentals of Engineering exam to become a Professional Engineer registration (licensure) later in their career. Officers who have an architecture degree should enroll in the Architectural Experience Program (AXP) of the National Council of Architect Registration Boards (NCARB) to become eligible for Registered Architect licensure later in their career. Various professional reading lists and doctrinal publications are available, such as the Engineer Regimental Resource Menu, which officers should use to generate discussion in professional development sessions and self-assessment tools to increase self-awareness.To stay current in emerging technologies and ideas, engineer lieutenants should become engineer professional/technical organization members.

(4) Desired experience. Engineer lieutenants must acquire and master troop leading procedures, platoon and company operations, basic maintenance and logistical concepts, and administrative requirements inherent to platoons and companies. Each engineer lieutenant must also embody the Army's Warrior Ethos and values to train and lead Soldiers to win our Nation's wars.

d. Captain development.

(1) Education. The Engineer Captain Career Course (ECCC) prepares company-grade officers to command Soldiers at the company, troop, or detachment level and to serve as staff officers at battalion and brigade levels. Officers attend a CCC following selection for promotion to the grade of captain before a company-level command. Select captains who have demonstrated superior performance in

the Engineer branch may be selected to attend a school other than the United States Army Engineer School to include other operation branches (Armor, Infantry, Aviation, and Field Artillery) or the Marine Expeditionary Warfare School. This cross-training benefits combined arms officers of both branches. The captains' PME centers on the technical, tactical, and leadership competencies needed for success in follow-on assignments. Engineer captains may pursue technical engineer training through the USACE Proponent Sponsored Engineer Corps Training (PROSPECT) program. Engineer-specific technical training in project management, construction management, facilities management, geospatial engineering, environmental engineering, contracting officer representative, quality assurance, the Joint Engineer Operations Course (JEOC), and other related areas. The following certifications and tactical training are desired skills for further development of engineer captains: Those desired skill identifiers are: (S4) Sapper, (5R) Ranger, (5P) Airborne, (5W) Jumpmaster, (3X) Bradley Leader Course, (R4) Stryker Leaders Course, (W3) Professional Engineer, (W4) Degreed Engineer, (W5) Project Management Professional, (W2) Geospatial Engineer Officer.

(2) Assignment.

(a) KD (12 - 18 months) assignment as a company commander is critical for an engineer captain for a minimum of 12 months.

(b) The following assignments for captains are examples of developmental/broadening opportunities. A mixture of these assignments further develops technical and tactical competencies and the experience base necessary to succeed at the field grade level and beyond. Engineer captains should seek to serve in the following developmental/broadening assignments:

- CTC Observer/Coach/Trainer
- Small Group Leader / Instructor (USAES/MSCoE)
- Aide de Camp
- HRC Assignments Officer
- Security Force Assistance Brigade (SFAB) Team Leader/Team Advisor/Construction Officer
- ENSOF Assist. Group Engineer/Assist. Command Engineer/Assist. Ranger BN EN
- Instructor/Tactical Officer (USMA/ROTC)
- JCS Internship/Congressional Fellowship/MSG Wright MBA
- USACE Project Officer/Project Engineer/Project Manager
- Geospatial Engineer
- AC/RC Observer/Coach/Trainer
- ACS/TWI/RSMS/BOP/PB-GSIP with utilization requirement
- Doctrine/Training/Capability Developer
- Exchange Officer

(3) Self-development. Numerous opportunities exist for self-development at the captain level. Engineer officers must obtain a graduate degree before promotion to the rank of lieutenant colonel. Officers attending the ECCC have an opportunity to get a master's degree through the professional development program from the Missouri University of Science and Technology (MS&T). Additionally, the advanced civil schooling option is a fully-funded program that supports advanced degree requirements for certain branches and FAs. Many universities award constructive credit for military courses, facilitating earning an advanced degree at an accelerated pace. Lastly, an officer can obtain an advanced degree at their own expense or by using tuition assistance during off-duty hours. AR 621-2 provides a full explanation and eligibility requirements for these programs. The Engineer Branch encourages officers with undergraduate engineering degrees to pursue a graduate-level degree in engineering or a related engineer mission discipline. Without an undergraduate engineering degree, officers may obtain a master's degree in Geography or Geographic Information Systems; Engineering or Construction Management; Urban, City or Regional Planning; Architecture or other mission-related disciplines. These disciplines may support qualification for an SI or support a FA designation and provide the skills necessary for higher-level command and staff positions. Officers who have passed the Fundamentals of Engineering exam should prepare for and take the Professional Engineer exam. Officers who have completed the AXP should prepare for and take the six sections of the Architecture Registration Exam (ARE). Officers who meet the experience requirements should prepare for and take

either the Project Management Professional or Certified Construction Manager exams. Postgraduate junior and mid-career officers are encouraged to attend the Army's Strategic Broadening Seminar (SBS) to expand their ability to forecast requirements, anticipate needs, and derive the appropriate support at the strategic planning level. Graduates of SBS earn the 6Z (Strategic Studies Graduate) ASI. Various professional reading lists and doctrinal publications are available that officers should use to generate dialogue in professional development sessions and self-assessment tools to increase self-awareness. To stay current in emerging technologies and ideas, engineer captains should be members of engineer professional/ technical organizations. Completing online courses through AKO Distributive Learning, DAU, and learning a foreign language is highly encouraged.

(4) Desired experience. Engineer captains must complete a 12 to 18 months KD assignment and strive to complete several developmental assignments before promotion to the rank of major. Captains transition their development to mastery of engineer support to Army unified land operations.

e. Major development.

(1) Education. After selection for promotion to major, engineer officers attend the Army's Intermediate Level Education (ILE). ILE aims to provide all mid-grade officers a basic foundation of professional military education and leader development training. It develops Engineer leaders prepared to execute multi-domain operations; trains and educates leaders in the practice and values of the profession of arms; and prepares leaders to operate in joint, multi-national, and interagency environments. ILE prepares engineer officers for duty as staff officers throughout the Army, primarily at brigade and higher echelons. ILE is a blanket term that encompasses all MEL 4/JPME 1 producing venues. ILE includes theUS Army Command and General Staff Officers Course (CGSOC), Sister Service (Navy, Air Force, Marine) Command and Staff Courses, WHINSEC (Western Hemisphere Institute for Security Cooperation), Foreign Command and Staff Schools, the Naval Postgraduate School (NPS) and the National Intelligence University (NIU) JPME 1 Track. For the most competitive majors, additional educational opportunities following CGSOC exist, including degree programs at the School of Advance Military Study (SAMS). Graduates of SAMS degree programs are eligible for the Advanced Military Studies Program Graduate ASI (6S). The Engineer Branch recommends majors attend the Joint Engineer Operations Course (JEOC) or the Joint, Interagency, Multinational Planners Course (JIMPC) to prepare field grade officers for future JIIM assignments. The Engineer Branch desires the following certifications for further development of engineer majors: Those desired skill identifiers (SI) are (W3) Professional Engineer, (W5) Project Management Professional, (W6) Project Engineer, and (W8) Facility Engineer.

(2) Assignment.

(a) KD (12–24 months) assignment in one or more of the below jobs is critical for an engineer majorand should be held for a minimum of 12 months

- Battalion/Brigade XO
- Battalion/Brigade operations officer (S3)
- Ranger Regiment/Special Forces group engineer
- SFAB XO or S3

(b) Developmental/broadening. The following assignments are important to the broadening of engineer majors allowing them to provide an engineering perspective in JIIM and other non-engineer organizations. Some of these assignments are available to majors after completing a KD assignment, while others are available before completing a KD assignment. The individual and HRC management of the officer's career timeline is critical to ensure correct position given Army requirements:

- CTC/MTCP Observer/Coach/Trainer
- Aide de Camp
- HRC Assignments Officer
- SFAB Advisor Company Commander, Brigade/Battalion XO/S3, SFAB Brigade Engineer Officer
- Joint/ASCC/HQDA/ACOM staff
- School of Advanced Military Studies (SAMS)

- Instructor (USMA/USAES/ROTC)
- JIIM Staff Officer
- Division Engineer Planner/TAC Engineer Officer
- USACE Deputy District Commander
- Geospatial Engineer
- Royal School of Military Survey (RSMS)
- Doctrine/Training/Capability Developer
- Advanced Civil Schooling (ACS)
- Exchange Officer
- Forward Engineer Support Teams (FEST-A or FEST-M)

(3) Self-development. Engineer majors must continue refining and building upon their technical competence using self-development. Engineer Branch encourages all engineer officers to have a master's degree in engineering or a related technical discipline at this point in their careers. Eligible officers should complete Professional Engineer or Registered Architect (licensure). Engineer Branch encourages all officers to pursue and obtain other professional certifications such as PMP, CCM and LEED-AP. To differentiate officers by technical discipline, engineers at the field grade level should maximize the use of DA Pam 611–21 Army recognized skill identifiers (SIs). Various professional reading lists and doctrinal publications are available that officers may use to generate discussion in professional development sessions and self-assessment tools to increase self-awareness. Engineer majors may also increase their participation in professional/technical organizations to stay current in emerging technologies and ideas. Completing online courses through AKO Distributive Learning, DAU is encouraged, and learning a foreign language is highly encouraged.

(4) Desired experience. Engineer majors must complete a KD assignment for 12 to 24 months. Engineer majors should also serve in several developmental/broadening assignments to further develop their technical and tactical competencies and broaden their experience base to succeed at the lieutenant colonel and colonel levels. Majors transition their development to mastery of engineer support as a part of joint and multinational operations.

f. Lieutenant colonel development.

(1) Education. After promotion to lieutenant colonel, an HQDA Board may select engineer officers to complete resident Senior Staff College (SSC) instruction. SSC typically occurs after engineer battalion command. Those not chosen by the HQDA board should consider completing the nonresident Army War College distance education course. The Joint Engineer Operations Course or the Joint, Interagency, Multinational Planners Course provides lieutenant colonels with a knowledge base of joint operations needed at this grade and is highly encouraged. Engineer lieutenant colonels centrally selected for battalion-level command must attend the Engineer Branch and the CSA foundational pre-command courses (PCC). Following the CSA foundational PCC, commanders proceed with an additional course depending on the type of command. Tactical commanders attend the Tactical Commander's Development Course. Functional commanders (TRADOC, Recruiting, USACE, Garrison, and TSBn) attend a Functional Commander PCC.

(2) Assignment.

(a) Key developmental. All promotable engineer majors and lieutenant colonels are eligible to compete for lieutenant colonel-level command during the Command Selection Board and the Battalion Command Assessment Program (BCAP). Selection is based primarily on the officers overall performance, demonstrated potential to lead larger organizations, experience, and qualifications. A centralized selection board selects officers in a given category based on HQDA guidance. HRC slates officers to specific units within the categories. Officers considered for command must "opt-in" in all categories to compete. The HQDA CSL designates commands into four functional categories:

(1) Operations. This includes TOE engineer battalions throughout the Army and brigade engineer battalion within BCTs for AC and RC. The majority of engineer lieutenant colonel commands are in this category.

(2) Strategic support. Lieutenant colonel USACE engineer district commands are in this category.

(3) Recruiting and training. TRADOC engineer battalions and training support battalions are in this category and branch immaterial USAREC battalion commands.

(4) Installation. Branch immaterial garrison commands are in this category. Engineer officers compete with all officers considered in this category.

(5) Second Commands. Battalion Commanders may compete for a second command in SFAB Brigade Engineer Battalions and select US Army Recruiting Commands.

(b) Developmental/broadening. The objective of lieutenant colonel assignments is for officers to continue to provide a valuable contribution to the regiment, the Army, and our nation based on their unique experiences and qualifications. Officers desiring to contribute in the tactical arena have numerous opportunities on staff at all levels. Officers desiring to contribute in the technical arena have numerous opportunities in USACE and IMCOM. The following developmental and broadening assignments enhance the officer's technical and tactical competencies in a wide range of skill sets and offer operational and strategic value to the Army:

- Senior observer/coach/trainer at a CTC
- USAES Chief of Staff
- HRC Branch Chief
- HQDA Office of the Chief of Engineers Staff
- Army Futures Command (AFC)/Futures and Concepts Center (FCC) Staff
- BDE/DIST Deputy Commander/XO
- DIV/Corps Staff
- USASOC Command Engineer
- Joint/ASCC/HQDA/ACOM Staff
- JIIM Staff Officer
- ROTC Professor of Military Science

(3) Self-development. Engineer lieutenant colonels must continue refining and building upon their technical competence using self-development. At this point in an officer's career, all engineer officers must have a master's degree, preferably in an engineer mission-related discipline. Eligible officers are encouraged to complete Professional Engineer or Registered Architect licensure. Officers are encouraged to pursue and obtain other professional certifications such as PMP, CCM, LEED-AP, and so forth. Other areas where engineer lieutenant colonels may consider certification and credentialing are geospatial and environmental engineering, contracting, and other strategic planning and management disciplines. Various professional reading lists and doctrinal publications are available that officers should use to generate discussion in professional development sessions and self-assessment tools to increase self-awareness. The Engineer Branch encourages lieutenant colonels to be active contributors to professional/technical organizations to remain current in emerging technologies and ideas. Completing online courses through AKO Distributive Learning, DAU is encouraged, and learning a foreign language is highly encouraged.

(4) Desired experience. Engineer lieutenant colonels are subject matter experts within any organization to which they are assigned. A wide variety of assignments ensures tactical and technical expertise that is comfortable in all levels of warfare (tactical, operational, and strategic).

g. Colonel development. The professional development objective for this phase of an officer's career is a joint qualification, sustainment of warfighting, training, and staff skills, along with the provisions of senior, seasoned leadership, management, and executive talents. The majority of strategic-level leaders in the Army are colonels. The Army expects Colonels to be multi-skilled leaders, strategic and creative thinkers, builders of leaders and teams, competent full spectrum warfighters, skilled in governance, statesmanship, and diplomacy, and understand the cultural context and work effectively across all domains.

(1) Education. After selection for promotion to colonel, engineer officers should complete SSC, either resident or nonresident. Opportunities for educational fellowships are also available and can grant MEL SSC accreditation instead of an SSC attendance. All colonels should pursue joint qualification, consisting of two parts: an education component and an experience component. Officers meet the education requirement by completing the 10-week JPME II course or resident

SSC attendance at any service war colleges. The education requirement for joint qualification is not waiver-able. The officer meets the experience requirement by serving an assignment in a joint billet for a prescribed period (usually 22-months, but less for combat and hardship assignments). Officers can apply for experience-based credit in place of assignment but must demonstrate significant interaction with joint or interagency actors/organizations. Colonels interested in experience-based credit should work closely with their HR manager at the Senior Leader Development Office to ensure compliance with the most current waiver rules and request format. Engineer colonels centrally selected for brigade-level command must attend the Army, branch, and functional PCCs.

(2) Assignment.

(a) Key developmental. Selection for colonel-level command is extremely competitive. Promotable engineer Lieutenant Colonels and Colonels are eligible to compete for Colonel-level command during the Command Selection Board and the Colonels Command Assessment Program (CCAP). Selection is based primarily on the officer's overall performance, demonstrated potential to lead larger organizations, experience, and qualifications. A centralized selection board selects officers in a given category based on HQDA guidance. HRC slates officers to specific units within the categories. Officers considered for a command submit a category preference list in which they desire to compete. The HQDA CSL designates commands into four functional categories:

(1) Operations. This includes TOE engineer brigades throughout the Army as well as BCTs.

(2) Strategic support. Colonel USACE engineer districts and TPO Geospatial Chief are in this category.

(3) Recruiting and training. TRADOC engineer brigade is in this category as well as branch immaterial USAREC brigade commands.

(4) Installation. Branch immaterial garrison commands are in this category. Engineer officers compete with all officers considered in this category.

(b) Developmental/broadening. The objective of colonel assignments is for officers to continue to provide strategic value to the Regiment, the Army, and our nation based on their unique experiences and qualifications. Assignments include organizations and duties beyond those discussed in earlier sections. The spectrum of possible assignments is broad and is characterized as highly responsible, important, and requiring mature, skilled, and well-rounded officers. The following assignments ensure that engineer colonels further develop the broad range of competencies they have obtained to provide strategic value to the Army and the nation.

- HQDA/Office of the Chief of Engineers, Director
- USACE Chief of Staff
- USAES Assistant Commandant
- Army Futures Command (AFC)/Futures and Concepts Center (FCC) Staff
- CDID Team Chief
- Combatant Command Staff
- USACE Staff
- MSCoE Staff
- Exchange Officer
- JIIM Staff Officer
- ROTC PMS
- Joint/ASCC/HQDA/ACOM/COCOMs Staff
- Corps Engineer
- OSD Staff Assignment

(3) Self-development. Engineer colonels must continue refining and building upon their technical competence using self-development. Various professional reading lists and doctrinal publications are available that officers should use to generate discussion in professional development sessions and self-assessment tools to increase self-awareness. To remain current in emerging technologies and ideas, engineer colonels should hold leadership positions and be chief contributors within professional/technical organizations.

(4) Desired experience. Engineer colonels are subject matter experts within any organization to which they are assigned.

Figure 1 - AC Engineer Officer's Development Model

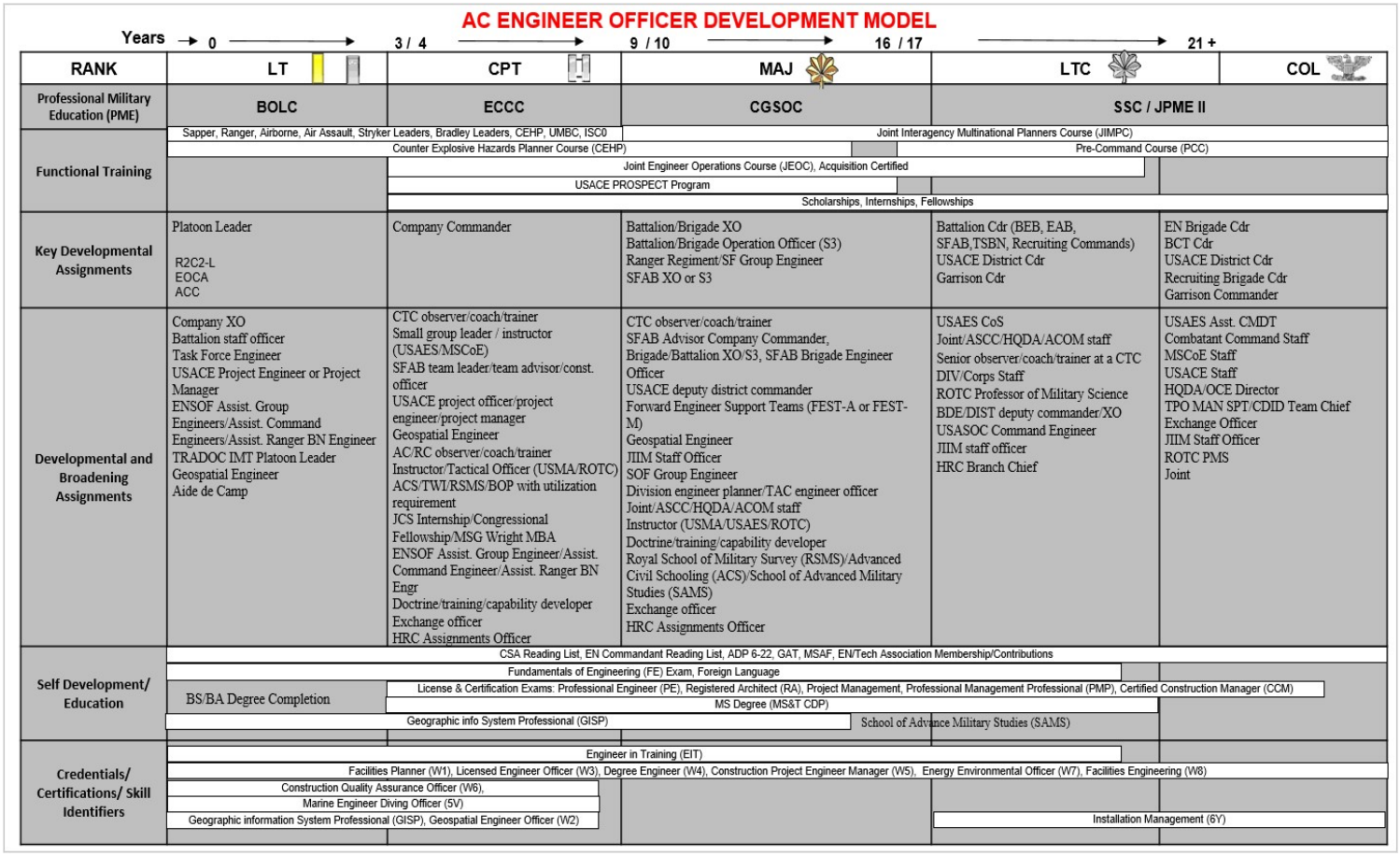


Figure 1.a. – Engineer Talent Demand Storyboard

Engineer Talent Demand

Year Group 2022

INTELLIGENCES: Interpersonal, Logical-Mathematical, Spatial

KNOWLEDGE: The Engineer branch strongly desires officers with academic backgrounds in the domain-specific disciplines listed below, with emphasis on degrees accredited by the Accreditation Board for Engineering and Technology (ABET), the National Architectural Accrediting Board (NAAB), the Landscape Architecture Accreditation Board (LAAB), the Planning Accreditation Board (PAB), and the American Council for Construction Education (ACCE). These disciplines provide foundations in scientific, design, and management methods that support mission-related problem solving.

- **RELEVANT EDUCATION PRIORITY 1:** Engineering (Architectural, Civil, Mechanical, Electrical, Systems, Environmental, Chemical, Nuclear, Geological, Geotechnical); Architecture (to include Environmental Design); Landscape Architecture; Planning (Urban, City, Regional, Environmental); Construction or Building Management/Science; Engineering or Project Management; Geosciences (include GIS, Geodesign, Geography, Geology, Geospatial Information).
- **RELEVANT EDUCATION PRIORITY 2:** STEM degrees and others include Management Science; Leadership Management; Military Science; Communications; Economics; Finance; Law; History; Political Science; National Security; Public Policy; International Relations
- **RELEVANT EDUCATION PRIORITY 3:** All other disciplines.
- **RELEVANT TRAINING/EXPERIENCE:** Cadet Troop Leading Time / Leader Development Time (CTLT / CLDT) with Engineer Unit, or Academic Enrichment Program in engineering or related activity. Cadets in accredited engineering programs are encouraged to complete the Fundamentals of Engineering Exam (FEE) prior to graduating (Reimbursable after commissioning).

SKILLS: The Engineer Branch is looking for candidates to become tactical and technical warriors that are devoted to providing maneuver commanders and ground forces with freedom of action at every echelon. Engineer officers have unique opportunities to enhance their leadership talents and development through military schools, credentialing/certification programs, and advance civil schools exclusive to the Engineer Regiment. Collectively, these skills make Engineer officers superb project managers and tenacious problem solvers that are capable of operating in ambiguous environments solving the nation's toughest problems. Engineer leaders possess the drive to succeed and master all challenges, and are willing to exploit opportunities for self-development.

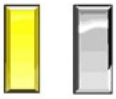
BEHAVIORS: (In addition to foundational)

- MENTALLY TOUGH
- VERBAL REASONING
- PLANNING & ORGANIZING
- PHYSICALLY FIT
- INTERPERSONAL
- INSPIRING
- INTELLECTUALLY CURIOUS
- PERCEPTIVE
- DEPENDABLE
- EXPERT
- INNOVATIVE
- PROACTIVE
- ADAPTABLE
- AMBITIOUS
- CHARISMATIC
- COMMITTED

TALENT PRIORITIES:

1. **DOMAIN-SPECIFIC EDUCATION (30%):** Possessing a degree in engineering (ABET-preferred), architecture or environmental design (NAAB-preferred), construction management/science (ACCE-preferred), landscape architecture (LAAB preferred), planning (PAB-preferred), high performers in science, technology, engineering, and math (STEM) disciplines.
2. **PROBLEM SOLVER (20%):** Able to choose between best practices and unorthodox approaches to reach a solution. Accomplishes the task.
3. **PROJECT MANAGER (20%):** Able to determine requirements, develop work processes, delegate responsibilities, and lead teams to desired outcomes.
4. **COMMUNICATOR (10%):** Precise, efficient, and compelling in both written and spoken word.
5. **DETAILED FOCUSED (10%):** Thorough, perspective, and precise in all matters. Possesses a keen eye and notices everything.
6. **MULTI-TASKER (10%):** Rapidly processes and prioritizes multiple demands simultaneously. Takes appropriate action when multiple things compete for his or her attention.

Figure 1.b. – Engineer Officer Knowledge, Skills, and Behaviors (KSBs)



Knowledge: Engineer lieutenants possess a breadth of knowledge relevant to their duties, and an in-depth understanding of engineer unit capabilities, mastery of troop leading procedures, and the fundamental tenets of breaching, bridging and general engineering. They have an understanding of basic maintenance and logistical concepts, and the administrative requirements inherent to platoons and companies.

Skills: Engineer leaders possess the drive to succeed and master all challenges, and are willing to exploit opportunities for self-development. Upon completion of the Basic Officer Leader Course, Engineer lieutenants are skilled problem solvers, using tactical art and mechanical reasoning in their role as platoon leader and advisor to the Commander. They supervise tactical missions and skillfully oversee projects through their exceptional interpersonal skills and understanding of how to fight as an engineer in multi-domain operations. Lieutenants are leaders of character, demonstrate mastery of Army Ethos and Army Values, bedrock within the organization.

Behaviors:

- Project Management
- Quantitative Reasoning
- Directing & Supervising Others
- Unstructured Problem Solving
- Tactical Art/How to Fight
- Oral Communication
- Juggling Competing Demands
- Tolerating Pressure
- Planning & Organizing
- Physical Strength & Endurance
- Judgement & Decision Making
- Assertive
- Inspirational Leader
- Tenacious, Persistent, or Diligent

Knowledge: Engineer captains meet the challenging and demanding requirements of command through their thorough understanding of the engineer role in combined arms operations and mastery of the brigade and battalion orders process. Their understanding of Army and Engineer system capabilities along with company and battalion tactics ensure successful application of the engineer unit capability in Multi-Domain Operations. As a commander, their in-depth understanding of the requirements of unit sustainment and unit maintenance ensure unit readiness as part of the combined arms team. They gradually become aware of strategic trends and concepts.

Skills: Engineer captains are tactically and technically competent engineer warriors and leaders of character, whose expertise in project management and training management make them superb problem solvers and skillful company commanders. Their ability to communicate effectively with peers, subordinates and senior leaders both within and outside the branch is key to their successful accomplishment of any mission.

Behaviors:

- Project Management
- Planning & Organizing
- Inspecting Equipment, Objects, Structures or Materials
- Unstructured Problem Solving
- Construction/ Facilities Management
- Oral Communication
- Tolerating Uncertainty
- Adaptability
- Assertive
- Attentiveness
- Cooperative
- Intellectually Curious
- Proactive
- Innovative
- Physical Strength/Physical Endurance
- Inspirational Leader

Knowledge: Engineer majors possess an extensive understanding of the role of the Engineer in Combined Arms and Joint Operations as well as the Division and Corps orders process. Their mastery of operational design and grasp of combined arms capabilities provide leadership and insightful collaboration in planning and leading organizations at the brigade and higher echelons. They are masterful tacticians and experts in the application of engineer capabilities in combined arms operations. They develop awareness of the budgeting process and improve on their understanding of strategic trends and concepts.

Skills: Engineer majors serve as dynamic professionals who motivate, coordinate and lead collaborative teams toward novel solutions to complex problems in ambiguous and volatile operational climates. Through their deep understanding and capability in process analysis and improvement, Engineer majors deliver decisive and collaborative analysis, exerting operational influence as key members of the combined arms planning and leadership team. They thrive and provide the ability to visualize, describe and generate solutions to challenging problems in diverse operational scenarios.

Behaviors:

- Motivating Others
- Team Building
- Training & Developing Others
- Relationship Building
- Directing & Supervising Others
- Executes Plans
- Specialized Expertise
- Identifies Opportunities
- Coordinating Multiple Groups
- Inspirational Leader
- Project Management
- Analytical Thinking
- Processes Information & Data
- Operational Influence
- Creative Problem Solving

Knowledge: Engineer Lieutenant Colonels meet the complex challenges of battalion level command thru evolved mastery of combined arms operations to encompass Corps, Joint and Multinational operations at a theater level. Their technical expertise as a senior engineer leader enables collaborative integration into US Army Corps of Engineer Civil and Military Operations and defense support to civil authorities. Their ability to think at the operational level while performing at a tactical level enables effective mission command by higher echelons and informs key MACOM and Department processes as they provide essential experienced-based analysis and contributions while serving in critical enterprise billets.

Skills: Engineer Lieutenant Colonels possess the emotional intelligence and refined executive leadership skills to integrate and command complex technical and tactical formations at a Battalion level. Expected to balance extended spans of control and complex command support relationships, Engineer LTCs possess a keen understanding and ability to apply highly skilled, low density EN capabilities, synchronize subordinate leaders/units and extend operational influence across supported teams and organizations, providing leadership and insightful collaboration in planning and leading organizations at the division and higher echelons. Efficient enterprise leaders, they shape, manage, and integrate Army Processes and Programs.

Behaviors:

- Decisive
- Directing & Supervising Others
- Strategic Thinking
- Social Perceptiveness
- Social Sensitivity
- Conflict Management
- Charismatic
- Inspirational Leader
- Working in Multidisciplinary Context
- Systems Thinking
- Delegating
- Knowledge/Domain Focused

Knowledge: Engineer Colonels are equipped with a robust and expansive understanding of how the Army runs, as well as Interagency and Intergovernmental policy and procedures. A solid grasp of the breadth and depth of the Army Engineer enterprise and its application within the National Defense Strategy and National Response Framework informs the senior officer's expert decision making and visionary leadership in any organization to which they are assigned. They are essential strategic leaders in ASCC/COCOM Operations, offering key insight into multi-domain operations grounded in years of experience in diverse and challenging assignments across the operational force.

Skills: Senior Engineer officers are seasoned professionals with executive-level talents in inspiring, leading, and managing organizations. They are interdisciplinary and multi-skilled leaders; strategic and creative thinkers; builders of leaders and teams; competent multi-domain warfighters; skilled in governance, statesmanship and diplomacy; and work effectively across the spectrum of DOTMLPF-P. Possessing social intelligence, they are masters of consensus building and leverage their technical and procedural credibility to exercise strategic influence.

Behaviors:
- Charismatic
- Decisive
- Strategic Thinking
- Innovative
- Inspirational Leader
- Strategic Thinking
- Social Perceptiveness
- Working in Multidisciplinary Context
- Oral Communication
- Written Communication
- Specialized Expertise
- Lead Strategic Change

4. Warrant officer development

a. Unique knowledge and skills of the engineer warrant officer. Engineer warrant officers are adaptive and experienced leaders, expert technicians, and warfighters. They have technically-unique skills, knowledge, and behaviors that require continuing professional development through progressive levels of training, education, and assignments. The engineer warrant officer provides commanders and staff with expert technical and tactical advice on construction management, survey and design operations, power production and distribution systems, terrain analysis, and geospatial information and services across a broad spectrum of engineering operations. As highly specialized technicians, engineer warrant officers support a multitude of Army missions at all levels throughout their career. FMSWeb and Army Career Tracker websites have a complete list of available warrant officer positions.

b. Engineer branch warrant officer Military Occupational Specialties. Engineer warrant officers are highly skilled technicians who provide sound technical advice to commanders and staff based on expert analysis, experience, and an in-depth understanding of the challenge at hand. The following are MOS's for the Engineer Branch warrant officers: 120A - Construction Engineering Technician and 125D - Geospatial Engineering Technician.

(1) MOS 120A – Construction Engineering Technician Active Component Warrant Officer.

(a) Serves as the subject matter expert (SME) on construction operations, survey and design, electrical engineering, and project management in a multifunctional capacity across the broad and

diverse spectrum of engineering operations in both operational and non-operational units. Construction Engineering Technicians provide commanders and staff with expert technical advice on theater of operations construction, maintenance, repair and lifecycle management of vertical and horizontal infrastructure, construction operations, maintenance and repair of deployable hospital facilities and utilities, environmental concerns, project management, and warrant officer training strategies.

(b) Serves as an advisor on capabilities and limitations to engineering operations and coach, teach, mentor, and evaluate engineer Soldiers on all matters related to construction engineering operations.

(2) MOS 125D Geospatial Engineering Technician Active Component Warrant Officer.

(a) Serves as the subject matter expert (SME) on terrain analysis and Geospatial Information and Services (GI&S). Responsible for the generation, management, analysis, and dissemination of Geospatial data and products for use in Army Mission Command Systems and aids the commander and staff in visualizing the terrain and understand its impact on all military operations. As the geospatial technical expert, they collaborate with the planning staff and participates in each Military Decision Making Process step.

(b) Serves as an advisor on capabilities and limitations to geospatial engineering operations and coach, teach, mentor, and evaluate engineer Soldiers on all matters related to geospatial engineering operations.

c. Warrant Officer One Development

(1) Entry Level Education. A warrant officer selection board selects Engineer Warrant Officers following a thorough assessment of their technical and tactical competencies in the applied-for career field. Upon selection to become a warrant officer, all candidates must graduate from the Warrant OfficerCandidate School (WOCS). WOCS provides candidates with an understanding of the basic skills and behaviors essential in developing an effective Army Warrant Officer. WOCS occurs in two phases: Phase I is available through Distance Learning (DL) and Resident, while Phase II is a 5-week resident course at Fort Rucker, AL. All AC and RC warrant officer candidates must attend the resident WOCS or the two-phased regional training institute run by State ARNG.

(2) Basic Education. After completing WOCS, WO1s must attend their MOS-specific Warrant Officer Basic Course (WOBC). Appointment to WO1 is contingent upon certification by the United States Army Engineer Schools Personnel Development Office after completing the Candidate's respective WOBC. The Engineer WOBC certifies warrant officers as technically and tactically competent officers able to serve in the Engineer Regiment. Construction Engineering and Geospatial Engineering Technicians education, training, and the core skills necessary to lead engineering operations successfully. Graduates of the WOBC receive qualifications in the following areas:

(a) 120A Construction Engineering Technician. The 120A WOBC consists of supervising, managing, and coordinating general engineering projects such as survey and design operations, vertical construction projects, horizontal construction projects, and force protection efforts; plan and manage theconstruction of utility systems; determine, plan, and employ tactical electrical power systems; manage construction programs, power generation plants, and facility maintenance programs while integrating with staff operations from the battalion level down through the Military Decision Making Process (MDMP).

(b) 125D Geospatial Engineering Technician. The 125D WOBC consists of managing geospatial engineering operations, doctrine, emerging geographic information systems and technology, and Army operations. It emphasizes managing geospatial information and services products in support of MDMP at the brigade level.

(3) Desired Experience. Engineer Warrant Officer Basic Course graduates must attain and maintain basic-level competence and certification in their MOS technical skills. Continued education, training, and experience in basic-level technical engineering operations prepare the warrant officer for future assignments and selection to the next higher rank.

(4) Assignment. Upon completing the MOS WOBC, the warrant officer can expect junior-level developmental assignments within their specialty, as depicted in the engineer warrant officer career path (figures 2 & 3). These assignments give the junior warrant officer a solid foundation of experience and depth to build off and prepare for assignments at higher levels

(a) 120A Construction Engineering Technician Assignments. WO1s serve in:

- Brigade Engineer Battalions
- Echelons Above Brigade Battalions
- Engineer Construction Companies (ECC)
- Engineer Support Companies (ESC)

(b) 125D Geospatial Engineering Technician Assignments. WO1s serve in:

- Brigade Combat Teams
- Cavalry Regiments
- Sustainment Brigades

(5) Self Development. Self-development should include distance learning courses, functional courses, civilian education, and Army leader professional reading lists. The junior warrant officer should devote time to improving both their MOS technical comprehension and their warfighting competencies. Engineer Branch recommends civilian education objectives include a degree or certification plan that aligns with and enables their technical proficiency.

d. Chief Warrant Officer Two Development

(1) Basic-Level Education. No institutional training requirement.

(2) Desired Experience. Assignment experience and mastering basic skills are fundamental to the development of junior warrant officers. The Engineer Branch expects CW2s to begin mastering their particular functional MOS and refining the technical and tactical knowledge required to perform at the next higher grade. Junior warrant officers should focus on pursuing and excelling at developmental positions to maintain competence and enhance MOS technical skills.

(3) Operational/Developmental Assignments. Engineer warrant officers can expect and should seek assignments of increased responsibility to refine the knowledge, skills, and experience gained from previous assignments and training. Developmental positions are critical to the growth of an effective warrant officer. Select warrant officers who have proven they can perform at levels above their peers can also expect to receive assignments that broaden their skills. See Figures 2 and 3 for additional details.

(a) 120A Construction Engineering Technician Assignments. CW2s serve in: CW2s serve in:

- Brigade Engineer Battalions (BEB)
- Echelons Above Brigade Battalions
- Engineer Construction Companies (ECC)
- Engineer Support Companies (ESC)
- Prime Power Platoons

(b) 125D Geospatial Engineering Technician Assignments. CW2s serve in:

- Brigade Combat Teams
- Sustainment Brigades
- Engineer Brigades
- Geospatial Planning Cells
- Civil Affairs Brigade
- 8th Army HQ

(4) Broadening Assignments. Broadening assignments are limited, and the opportunity should not hinder the development of technical expertise. See the 120A or 125D Career Assessment Tool in Figures 2 and 3 for additional details.

(a) 120A Construction Engineering Technician Assignments. CW2s can serve in:

- Security Forces Assistance Brigades (SFAB)
- The White House
- Arlington National Cemetery
- Warrant Officer Career College
- Special Forces Command/Groups

(b) 125D Geospatial Engineering Technician Assignments. CW2s can serve in:

- The Army GEOINT Battalion

- The Joint Intelligence Center

(5) Self Development. CW2s should continue to build upon and refine their personal and professional competencies by seeking out self-development opportunities. Degree plans and professional certifications that complement relevant technical skills broaden the warrant officer's perspective and technical comprehension.

e. Chief Warrant Officer Three Development

(1) Advanced-Level Education. Warrant Officer Advance Course (WOAC) focuses on advanced technical training and common core engineer leader development skills designed to increase overall knowledge and prepare the warrant officer for assignments in Field Grade Technical Engineering positions.

(a) 120A Construction Engineering Technician. The 120A WOAC consists of training on the development of base camp master planning, the Deployable Medical Systems (DEPMED) found in Army Field and Combat Support Hospitals, supervise the planning of facility construction, operations and maintenance, and engineer common leader skills.

(b) 125D Geospatial Engineering Technician. The 125D WOAC consists of integrating geospatial engineering operations, doctrine, emerging geographic information systems and technology, and Army operations. It emphasizes integrating geospatial information and services products to support MDMP at the division, corps, and Army Service Component Command (ASCC) levels.

(2) Desired Experience. Engineer warrant officers at this level must possess the expertise and the requisite senior-level proficiency to perform next to Army senior leaders. Senior-level Engineering Technicians provide leader development, mentorship, and sound technical advice to commanders, staff, NCOs, officers, and fellow warrant officers. CW3s must be knowledgeable and capable of providing technical guidance on operational level planning efforts while forecasting and integrating systems at multiple levels across formations.

(3) Operational/Developmental Assignments. Engineer warrant officers can expect and should seek out assignments of increased responsibility that refines the knowledge, skills and experience gained from previous assignments and training.

(a) 120A Construction Engineering Technician. CW3s serve in:

- Engineer Brigades
- Army Field and Combat Support Hospitals
- ASCCs
- 249th Prime Power Battalion
- Signal Command

(b) 125D Geospatial Engineering Technicians. CW3s serve in:

- Divisions
- Multi-Domain Task Force (MDTF)
- Geospatial Planning Cells
- Corps
- COCOMs

(4) Broadening Assignments. Engineer warrant officers can expect and should seek out assignments of increased responsibility that refines the knowledge, skills, and experience gained from previous assignments and training.

(a) 120A Construction Engineering Technician. CW3s can serve in:

- USACE Districts
- The US Army Engineer School
- 911th Technical Rescue Company

(b) 125D Geospatial Engineering Technicians. CW3s can serve in:

- The Joint Readiness Training Center (JRTC)
- Mission Command Training Program (MCTP)
- Joint Analysis Center, NATO
- The National Geospatial-Intelligence Agency (NGA)

(5) Self Development. Engineer warrant officers at this level have developed an advanced level of technical and tactical proficiency to prepare them to serve as senior-level managers and integrators within their specialty. Engineer Branch encourages CW3s to seek assignment-oriented training focused on future positions to enhance the warrant officer's duty performance. CW3s should refine and perfect their communication skills in preparation for high-level operational and strategic level positions. The distributed learning (DL) portion of the Joint Engineer Operations Course (JEOC) is a prerequisite for the Engineer WOILE-FO.

f. Chief Warrant Officer Four Development.

(1) Senior – Level Education. The Warrant Officer Intermediate Level Education – Follow On (WOILE-FO) provides technical skills necessary to integrate their expertise in support of leaders as staff officers, trainers, managers, systems integrators, and leaders at the tactical and operational levels of Army, Joint, Interagency, Intergovernmental, and Multinational (JIIM) organizations executing Unified Land Operations thru Decisive Action.

(a) 120A Construction Engineering Technician. 120A WOILE-FO consists of training on area development working groups, integrating engineer support to protection efforts, programming facility construction and maintenance at installation level (MILCON), employment of electrical systems across Theater of Operations and Army force management principles at Corps level and above.

(b) 125D Geospatial Engineering Technician. The 125D WOILE-FO consists of training to advise senior leaders on geospatial engineering operations, doctrine, emerging geographic information systems and technology, and Army operations. It emphasizes the identification and solution development for geospatial engineering operation DOTmLPF-P gaps and preparation for support at the Army Service Component Command (ASCC) and strategic levels.

(2) Desired Experience. Engineer warrant officers at this level must possess the expertise and the requisite senior-level proficiency to perform next to Army strategic leaders. Senior-level Engineering Technicians provide leader development, mentorship, and sound technical advice to commanders, staff, NCOs, officers, and fellow warrant officers. CW4s must be knowledgeable and capable of providing technical guidance on strategic level planning efforts while forecasting and integrating systems at multiple echelons across DoD and JIIM organizations.

(3) Organizational/Developmental Assignments. Engineer warrant officers can expect and should seek out assignments of increased responsibility that refines the knowledge, skills, and experience gained from previous assignments and training.

(a) 120A Construction Engineering Technician. CW4s serve in:

- Divisions
- Corps
- ASCCs
- 249th Prime Power Battalion
- Theater Sustainment Command

(b) 125D Geospatial Engineering Technician. CW4s serve in:

- Geospatial Planning Cells

(4) Broadening Assignments. Engineer warrant officers can expect and should seek out assignments of increased responsibility that refines the knowledge, skills, and experience gained from previous assignments and training.

(a) 120A Construction Engineering Technician. CW4s can serve in:

- The US Army Engineer School
- The Army Human Resources Command
- The White House

(b) 125D Geospatial Engineering Technician. CW4s can serve in:

- The US Army Engineer School
- The Army Human Resources Command
- COCOMs
- The National Geospatial-Intelligence Agency (NGA)

(5) Self-Development. To stay relevant and continue refining their knowledge engineer depth,

warrant officers should seek senior MOS technical expertise, knowledge, and experience. Take advantage of opportunities to participate in fellowships, strategic broadening seminars, and MOS specialty training.

g. Chief Warrant Officer Five Development.

(1) Master- level Education. No MOS – specific institutional training. Engineer Branch expects all engineer CW5s to complete WOSSE, an immaterial branch course that provides master-level warrant officers with a broader level perspective required for assignment to CW5 positions.

(2) Desired Experience. Engineer CW5s are master-level technical and tactical experts and provide leader development, mentorship, and sound technical advice to commanders, staff, NCOs, officers, and fellow warrant officers. CW5s have special mentorship responsibilities for other Warrant Officers at all levels and are responsible for providing essential advice to commanders on technical matters and Warrant Officer areas of interest. Engineer CW5s must become familiar with Army and Engineer organizational roles, functions, and missions, especially at the ACOM and Army staff levels and with the force management process.

(3) Assignments. Engineer CW5s serve in strategic and branch immaterial assignments. As master-level engineering technicians, CW5s serve at the highest levels within their specific MOS. CW5s also begin to serve on a broader variety of strategic assignments.

(a) 120A Construction Engineering Technician. CW5s can serve in:

- ASCC
- The US Army Engineer School
- The US Army Prime Power School

(b) 125D Geospatial Engineering Technician. CW5s can serve in:

- The Army GEOINT Battalion
- The Army Geospatial Center
- The Maneuver Support Center of Excellence
- The US Army Engineer School
- The National Geospatial-Intelligence Agency (NGA)

(4) Self-Development. Devoting time to developing a broader understanding of all aspects of Army engineering and engineer force structure is recommended. Engineer CW5s should sharpen their knowledge of personnel force integration functions for doctrine, training, and personnel on engineer functions. In addition, CW5s should become familiar with the constitutional, statutory, and regulatory basis for the force projection for the Army and the capabilities sustained through management of doctrinal, organizational, and materiel change.

Figure 2 – 120A Construction Engineering Technician Career Assessment tool

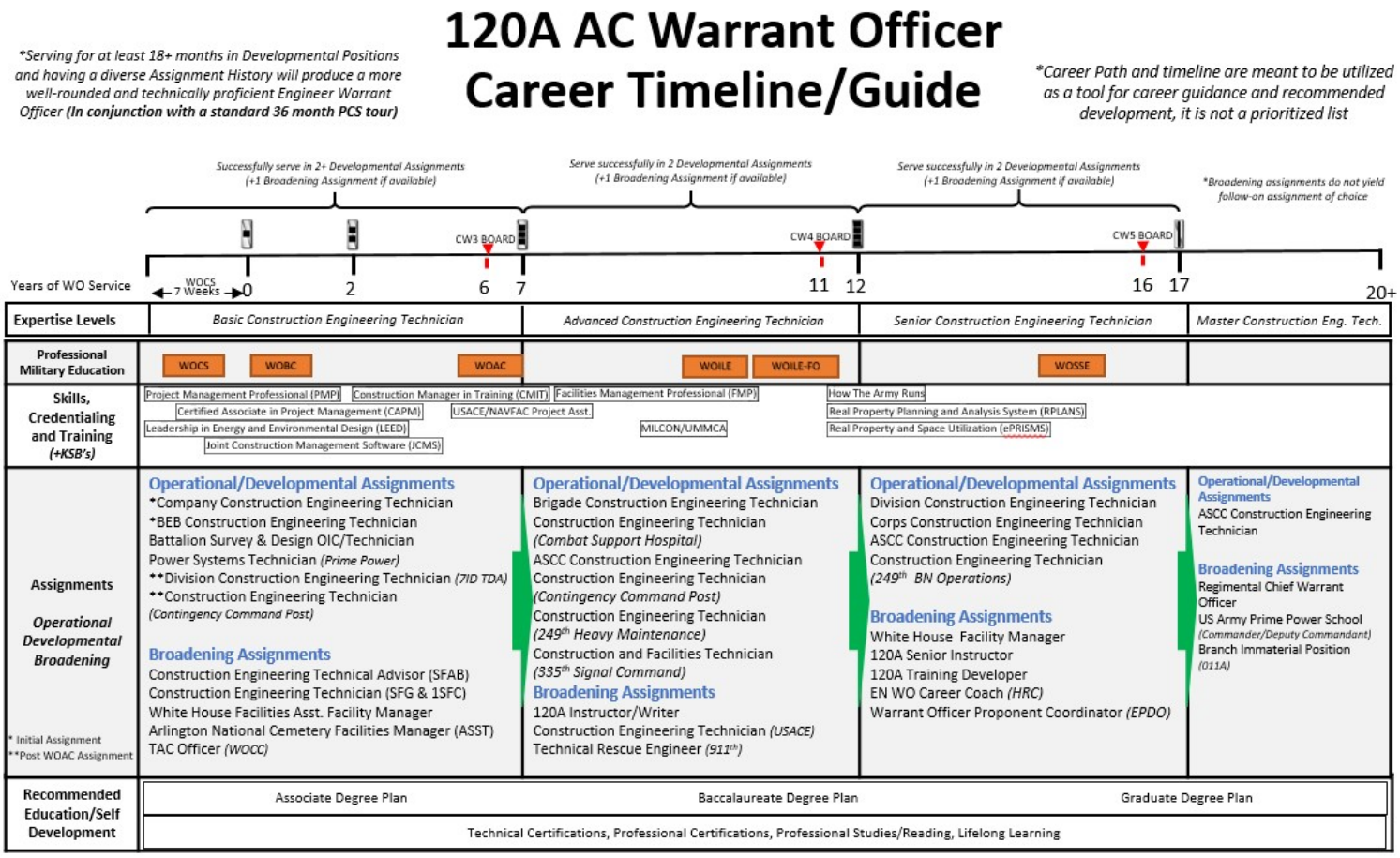


Figure 2.a. – 120A Knowledge, Skills, and Behaviors (KSBs)

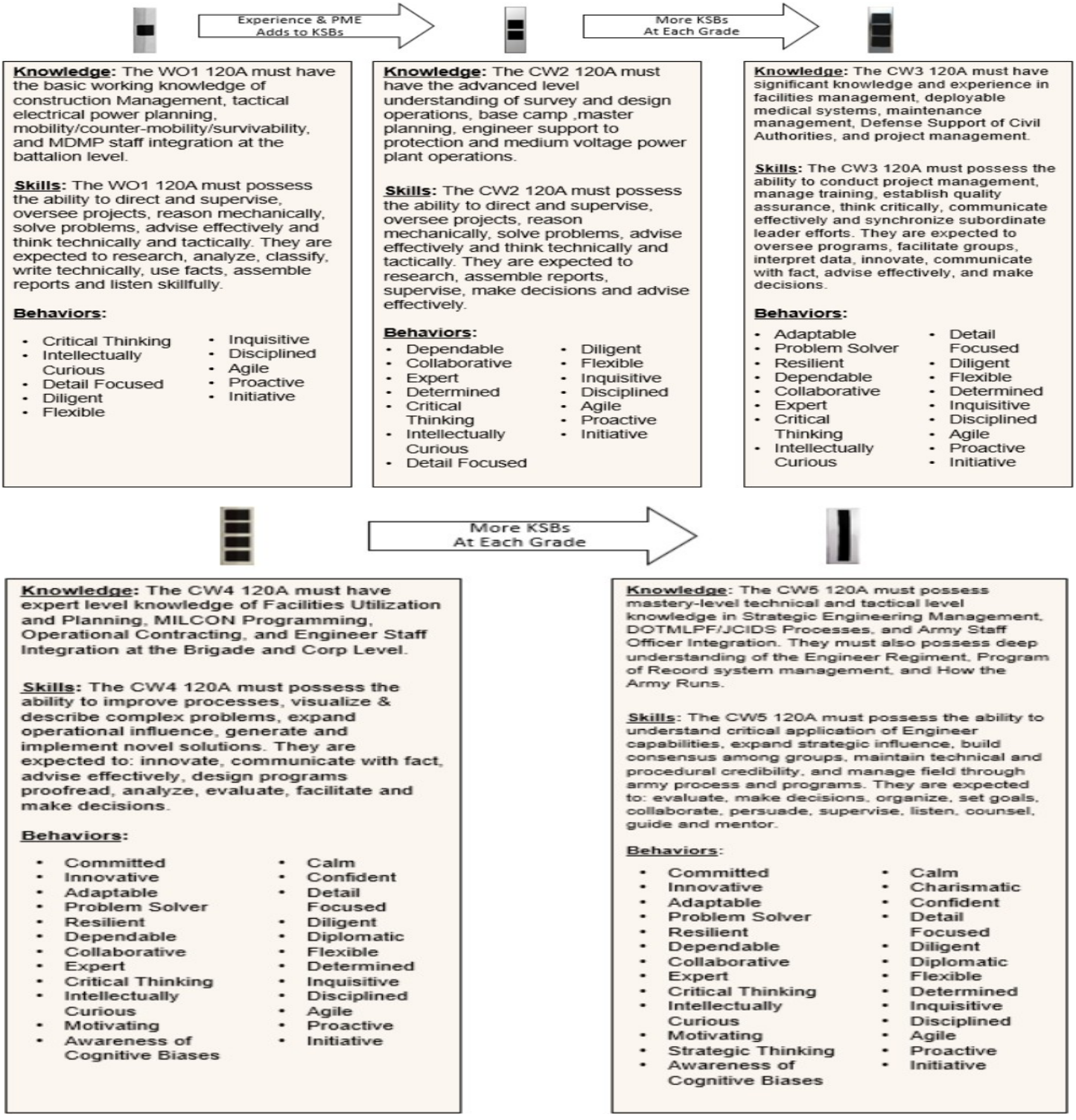


Figure 3 – 125D Geospatial Engineering Technician Career Assessment Tool

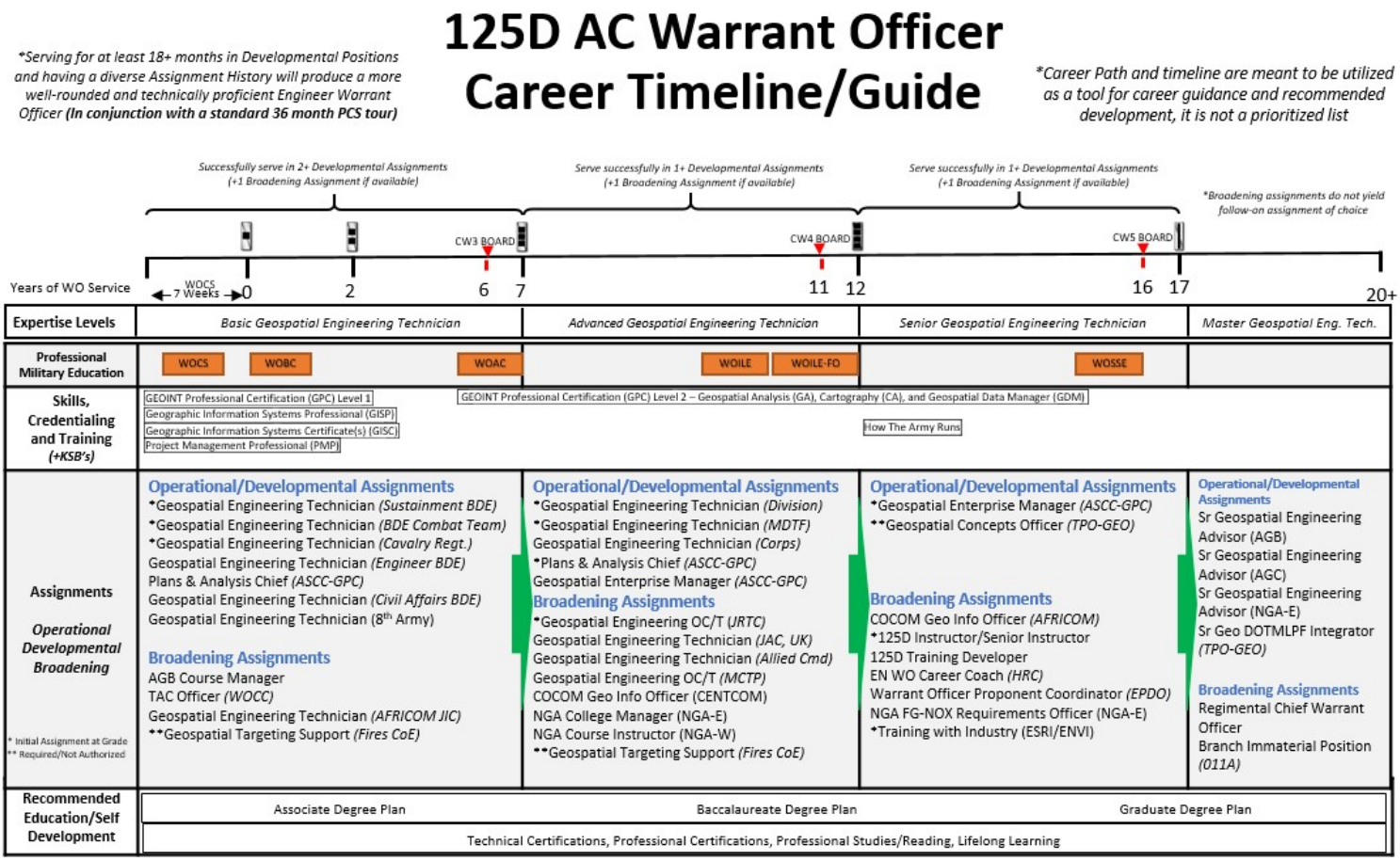
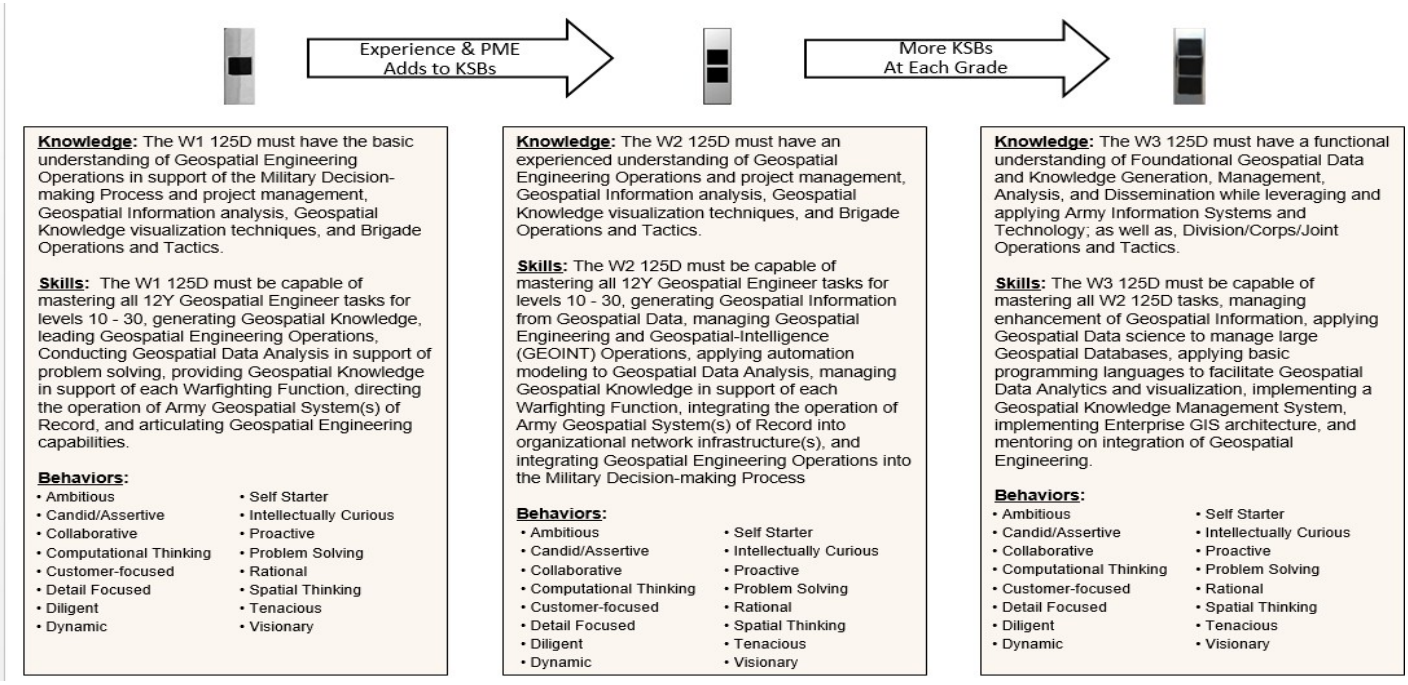


Figure 3.a. – 125D Knowledge, Skills, and Behaviors (KSBs)



5. Engineer Reserve Component officers

a. Officer development model. The officer development model for RC officers is generally the same as the AC officers except for these unique aspects of RC officer development and career management. The Engineer RC officer plays a vital role in the Engineer Regiment and the USACE. Practicing degreed engineers, Professional Engineers, Project Management Professionals, and construction management professionals bring technical competence to the Engineer Regiment. The Engineer Regiment is highly dependent upon the quality of the Engineer officers in USAR and ARNG units. Additionally, the quantity and quality of training that RC Engineer officers have dictates to a large extent their effectiveness. RC engineer officer development, in general, should parallel that of their AC counterparts. Generally, RC engineer officers are limited by geographical and positional opportunities. They should strive for assignments in engineer units and yield the same developmental and competitive opportunities as their AC counterparts. There may not be a sufficient number of positions within a geographic area to allocate engineer assignments. Therefore, planned rotation into progressively challenging engineer positions by RC commands is essential to producing engineer officers' best development. Engineer officers must work with their personnel management officer team to rotate between TPU, the IRR, the Individual Mobilization Augmentee (IMA) program, Drilling Individual Mobilization Augmentee (DIMA), Joint Reserve units, the IRR Augmentee (IRR–A) program, AGR programs, apply for short active duty tours, and make career strategic transfers between the USAR and ARNG to meet professional developmental objectives in the Army Reserve. Additionally, Engineer Branch encourages RC officers to seek positions outside their residence's geographic area when the individual officer's personally borne travel costs are acceptable. The USAR has Talent Management Advisors (TMA) that inform both the officer and chain of command in finding opportunities that aid in developing engineer officers and shaping the force.

(1) National Guard engineer officers should contact their state officer manager or their senior engineer officer (i.e., Engineer Brigade Commander, Major Subordinate Commander, Director of the Consolidated Facility Management Office, etc.) to ensure they can meet their professional development objectives.

(2) Transfers necessitated by geographical considerations and the need to provide as many officers as possible the opportunity to serve with troops in leadership and staff positions or complete PME requirements. An RC engineer officer's success is not measured by the length of service in any one component or control group but by the officer's depth and breadth of experience, assignments, duty performance, training, and adherence to branch requirements. Officers may elect to apply for a FA beginning at the rank of captain. Engineer officers in the IRR may find assignments in TPU, IMA, DIMA positions in AC organizations, installations or HQDA agencies, tours of active duty to support administrative requirements, contingency operations, or temporary tours on active duty. Assignments in the IRR are an opportunity for completing PME requirements.

b. General career development. As much as possible, RC officers should not be assigned to fill engineer SI – coded positions until they have completed the training and have received the SI. The USAES supports FORSCOM and the ARNG states in developing Engineer officers and engineer units in the USAR and ARNG. Through the Chief, NGB, the USAES also provides technical assistance to the respective state TAG (The Adjutant General) for ARNG Engineer officers' career management. In general, qualifications and professional development are similar to AC officers. The RC Engineer officer career map is in figure 4. The Army Reserve actively manages engineer officers through the US Army Reserve Engineer Officer Talent Management program. USAR engineers use the flexible career path chart in figure 4 in conjunction with guidance from their assigned Talent Management Advisor (TMA) and the career map in figure 4 to determine progressive assignments based upon the individual officer's knowledge, skills, and attributes and the needs of the Army.

(1) Award of engineer SIs for ARNG officers. ARNG officers, regardless of status, seeking an award of the SIs must apply to the HR organization of their affiliated state in coordination with the USAES. Each state, territory, and the District of Columbia holds final authority for the SI designation of affiliated commissioned officers, dependent on the state's needs and the organization where the officer is

currently assigned. Each state handles exceptions to the policy on a case-by-case basis in coordination with the ARNG. Officers should include documents substantiating successful completion of education and experience with the designation request (usually DA Form 4187). ARNG awards the Engineer SIs to ARNG officers based on a combination of educational instruction and experience in qualified positions (see AR 611–1).

(2) Award of the Engineer SIs for USAR officers. USAR awards SIs by area commanders and CG, US Army Human Resource Command (see AR 611–1).

c. Lieutenant development.

(1) Education. RC engineer lieutenants must complete EBOLC by the end of the second year (USAR) or 18 months (ARNG) of commissioned service. This strong foundation allows for continued leader development in the operational and self-developmental domains. Follow-on specialized engineerand non – engineer tactical training such as Sapper, Ranger, Airborne, Stryker or Mechanized Leader, and others may be available to support company-grade assignments dependent upon the requirements of the unit and officers career potential.

(2) Assignment. RC engineer lieutenants serve in leadership and engineer staff positions at the company and battalion level for a minimum of 18 – 24 months.

(a) KD (12 – 24 months) assignment as a platoon leader is critical for an engineer lieutenant recommended for a minimum of 18 months.

(b) The following assignments for lieutenants are examples of developmental/broadening opportunities after being a platoon leader. A mixture of these assignments provides company-grade officers with technical experience and the opportunity to lead, train, and support small units. This provides the foundation critical to continued growth as an engineer officer.

- Company XO
- Detachment Commander
- Battalion Staff Officer
- FEST (FCCME)
- USACE Project Engineer (AR, ADOS)
- Facilities Operations Specialist (CMFO) (NG)

(3) Self-development. Numerous opportunities exist for self-development at the lieutenant level. Reserve officers must have a bachelor's degree for promotion to captain, which is the self-development priority for officers without a degree. Opportunities exist for lieutenants to become full-time students and also to attend online and off-duty courses. Officers who have a Bachelor of Science degree from an Accreditation Board of Engineering and Technology (ABET) accredited institution are highly encouraged to take the Fundamentals of Engineering (FE) exam so they can become an Engineer in Training (EIT) to prepare for Professional Engineer (PE) registration (licensure) later in their career. Various professional reading lists and doctrinal publications are available that officers should use to generate discussion in professional development sessions and self-assessment tools to increase self-awareness. To stay current in emerging technologies and ideas, engineer lieutenants should become members of engineer professional/technical organizations. Completing online courses through AKO Distributive Learning, DAU, and learning a foreign language is highly encouraged.

(4) Desired experience. Engineer Lieutenants must acquire and master troop-leading procedures, platoon and company operations, basic maintenance and logistical concepts, and administrative requirements inherent to platoons and companies. Engineer Branch highly encourages lieutenants to enroll in the CC phase of ECCC-RC immediately upon promotion to 1LT or when they complete their KD platoon time if they already are a 1LT. Each engineer lieutenant must also embody the Army's Warrior Ethos and values so they can train and lead Soldiers to win our nation's wars.

d. Captain development.

(1) Education. RC Engineer captains must complete a CCC through either the RC or resident courses. It is highly encouraged for captains to attend a CCC before command. Most officers attend the ECCC. Options exist to attend other operations branch CCC for those officers deemed qualified by their chain of command and desiring to do so. Engineer Branch encourages Engineer captains to pursue technical engineer training through the USACE Proponent Sponsored Engineer Corps

Training (PROSPECT) program. Engineer-specific technical training in project management, construction management, facilities management, geospatial engineering, environmental engineering, contracting officer representative, quality assurance, and other related areas is available. Tactical training such as Sapper, Ranger, Airborne, and the Joint Engineer Operations Course is also available for officers assigned to units with specific requirements for these respective qualification training.

(2) Assignment.

(a) KD (12–24 months) assignment as a company commander is critical for an engineer captain held for a recommended minimum of 18 months.

(b) The following assignments for captains are examples of developmental/broadening opportunities. A mixture of these assignments further develops technical and tactical competencies and the experience base necessary to succeed at the field grade level and beyond. Engineer captains should serve in developmental/broadening assignments following their KD assignment.

- Battalion/Brigade Staff Officer
- Observer/Controller/Trainer (AC, ADOS)
- Small Group Leader (AC, ADOS)
- Instructor (USAES/ROTC)
- Doctrine/Training Developer (AC, ADOS)
- USACE Project Officer (AC, AR, ADOS)
- Exchange Officer
- Environmental Officer (AC, AR)
- Real Estate Officer
- Facilities Engineer (AC, AR, CMFO, RTI)
- Homeland Response Force (HRF) Staff Officer (NG)
- JFHQ Emergency LNO (NG)
- USACE Tour (Post KD) (AC, AR, NG)
- Facilities Operations Specialist (CMFO)(NG)
- Planning and Programming (CMFO)(NG)
- Engineer Plans and Services Branch (CMFO)(NG)

(3) Self-development. Numerous opportunities exist for self-development at the captain level. Engineer officers must obtain a graduate degree before promotion to the rank of lieutenant colonel. Officers attending the ECCC have an opportunity to get a master's degree from the University of Missouri Science and Technology's cooperative degree program. This opportunity is available to Reserve Component officers in an online/virtual format. Many universities award constructive credit for military courses, facilitating earning an advanced degree at an accelerated pace. Lastly, an officer can obtain an advanced degree at their own expense or by using tuition assistance. Their master's degree should be in a business or management-related field for those officers with undergraduate engineering degrees. For those officers without an undergraduate engineering degree, obtaining a master's degree in Geospatial Engineering/Geographic Information Systems, Business Administration, Operations Research, Management, Construction Management, Architecture, or a related technical discipline may support qualification for a SI or support a FA designation and provide the skills necessary for higher-level command and staff positions. Officers who have passed the Fundamentals of Engineering exam should actively begin preparation for the professional engineer exam. Officers should prepare to obtain the Project Management Professional (PMP) credential. Various professional reading lists and doctrinal publications are available that officers should use to generate discussion in professional development sessions development sessions and self-assessment tools to increase self-awareness. To stay current in emerging technologies and ideas, engineer captains should be members of engineer professional/technical organizations. Completing online courses through AKO Distributive Learning, DAU, and learning a foreign language is highly encouraged.

(4) Desired experience. Engineer captains should complete an 18 to 24 months KD assignment and strive to complete several developmental assignments before promotion to major. Captains

transition their development to mastery of engineer support of Army unified land operations.

e. Major development.

(1) Education. After selection for promotion to major, engineer officers manage their timeline to attendthe Army's ILE. It is highly encouraged for majors to attend ILE before a KD assignment. Successful completion of ILE qualifies the officer in JPME level 1. For the most competitive majors, additional educational opportunities following ILE exist, including advanced degree programs and SAMS. Engineer Branch recommends that majors attend the Joint Engineer Operations Course or the Joint, Interagency, Multinational Planners Course to prepare field grade officers for future JIIM assignments. RC Engineer majors may complete ILE through distance learning, Total Army School System Courses, a combination of the two, or residence courses.

(2) Assignment.

(a) KD (12–24 months) assignment in one or more of the below jobs is critical for an engineer majorand should be held for a minimum of 12 month

- Battalion/Brigade XO
- Battalion/Brigade Operations Officer (S3)
- BCT Engineer (I/ABCT/SBCT)
- State JFHQ Engineer Officer (ARNG)
- CFMO (ARNG)

(b) Developmental/broadening. The following assignments are important to the broadening of engineer majors by allowing them to provide an engineering perspective in JIIM and other non-engineer organizations and learn about other Army FAs. Some of these assignments are available for majors after completing a KD assignment, while others are available before completing a KD assignment. Timeline management of the individual officer is critical to ensure the officer is placed into the correct position given Army requirements:

- Brigade / TEC Staff
- Forward Engineer Support Teams (FEST-A or FEST-M)
- Observer/Controller/Trainer
- Engineer Planner/TAC Engineer Officer
- JIIM Staff Officer
- Doctrine/Training Developer
- Instructor (USAES/ROTC)
- Environmental Officer (NGB)
- RSC Commandant (USAR)
- Real Estate Officer
- Facilities Officer
- Joint/ASCC/HQDA/ACOM Staff
- HRC Engineer Branch Assignments Officer (USAR AGR).
- TEC Staff Officer (USAR)
- RSC DPW Staff Officer (USAR)
- Architect (USAR)
- Homeland Response Force Staff Officer (NG)
- Garrison Engineer (DPW) for State Installation (NG)
- JFHQ Emergency LNO (NG)
- USACE Tour (AC, AR, NG, ADOS)
- Planning and Programmer (CMFO)(NG)
- Engineer Plans and Services Branch (DPW, RTI)(NG)
- Chief of Public Works Division (NG)
- Design and Project manager Admin Officer/Dep. CMFO (PE Suggested)(NG)

(3) Self-development. Engineer majors must continue refining and building upon their technical competence using self-development. All engineer officers are highly encouraged to have a master's degree as outlined for captains at this point in their careers. Officers with undergraduate engineering

degrees who passed the Fundamentals of Engineering exam are encouraged to complete Professional Engineer registration (licensure). Officers without an undergraduate engineering degree are encouraged to pursue and obtain professional certifications such as PMP, Project Engineer, Geographic Information Systems Professional, and so forth. To differentiate officers by technical discipline, engineers at the field grade level should maximize the use of DA Pam 611–21's Army recognized SIs and project development SIs. Various professional reading lists and doctrinal publications are available that officers should use to generate discussion in professional development sessions and self-assessment tools to increase self-awareness. Engineer majors should also increase their participation in professional/technical organizations to stay current in emerging technologies and ideas. Completing online courses through AKO Distributive Learning, DAU, and learning a foreign language is highly encouraged.

(4) Desired experience. Engineer majors should complete a KD assignment for 12 to 18 months. Engineer majors should also serve in several developmental/broadening assignments to further develop their technical and tactical competencies and broaden their experience base to succeed at the lieutenant colonel and colonel levels. Majors transition their development to mastery of engineer support as a part of joint and multinational operations. Some majors develop a mastery of maneuver support operations and improve their competency to serve in maneuver enhancement brigades and protection staff officer positions. Some majors develop a mastery of facilities management to serve in installation management positions.

f. Lieutenant colonel development.

(1) Education. RC Engineer lieutenant colonels must complete ILE Advanced Operations Course (AOC) for promotion to colonel. HQDA, NGB, or State promotion selection boards may send lieutenant colonel, engineer officers to complete resident SSC or nonresident instruction. The Joint Engineer Operations Course or the Joint, Interagency, Multinational Planners Course provides lieutenant colonels with a knowledge base of joint operations needed at this grade and is highly encouraged. Engineer lieutenant colonels selected for battalion-level command attend the Army, branch, and functional PCCs.

(2) Assignment.

(a) Key developmental. All promotable engineer majors and lieutenant colonels are eligible to compete for lieutenant colonel-level command during the Command Selection Board process. Selection is based primarily on the officer's overall performance, demonstrated potential to lead larger organizations, experience, and qualifications. A centralized selection board selects officers based on HQDA guidance. Slating for command is dependent upon the officer's component and duty status. Officers should review the annually published MILPER message carefully to determine eligibility.

(b) Developmental/broadening. The objective of lieutenant colonel assignments is for officers to continue to provide a valuable contribution to the Engineer Regiment, the Army, and our nation based on their unique knowledge, skills, attributes, experiences, and qualifications. Officers desiring to contribute in the operational/tactical arena have numerous opportunities on staff at alllevels. Officers desiring to contribute in the technical arena have numerous opportunities. The following developmental and broadening assignments enhance the officers technical and tactical competencies in a wide range of skill sets and offer operational and strategic value to the Army:

- Brigade XO
- Division staff (division engineer, Chief of Protection, Chief of Plans)
- ROTC PMS (AGR only)
- AC/RC TS Battalion Commander
- Senior Observer Controller Trainer
- JIIM Staff Officer
- Deputy Installation Commander (USAR AGR)
- Joint/ASCC/HQDA/ACOM Staff
- State JFHQ
- ARNG Branch/DIV Chief

- Brigade Design Engineer (AC, AR, NG)
- Chief Public Works Division (CMFO)(NG)
- Design and Project manager Admin Officer/Dep. CMFO (NG)

(3) Self-development. Engineer lieutenant colonels must continue refining and building upon their technical competence using self-development. At this point in their careers, all engineer officers are highly encouraged to have a master's degree in an appropriate discipline as specified for captains. Other areas where engineer lieutenant colonels may consider certification and credentialing are geospatial and environmental engineering, contracting, and other strategic planning and management disciplines. Various professional reading lists and doctrinal publications are available that officers should use to generate discussion in professional development sessions and self-assessment tools to increase self-awareness. To remain current in emerging technologies and ideas, engineer lieutenant colonels should be active contributors to professional/technical organizations. Completing online courses through AKO Distributive Learning, DAU, and learning a foreign language is highly encouraged.

(4) Desired experience. Engineer lieutenant colonels are subject matter experts within any organization to which they are assigned. A wide variety of assignments ensures tactical and technical expertise that is comfortable in all levels of warfare (tactical, operational, and strategic).

g. Colonel development. The professional development objective for this phase of an officer's career is a joint qualification, sustainment of warfighting, training, and staff skills, along with the provisions of senior, seasoned leadership, management, and executive talents at the enterprise level. The majority ofstrategic level leaders in the Army are colonels. The Army expects colonels to be multi-skilled leaders, strategic, critical, creative thinkers, builders of leaders and teams, competent full spectrum warfighters, skilled in governance, statesmanship, diplomacy, and understanding of cultural context and work effectively across all domains.

(1) Education. After selection for promotion to colonel, engineer officers should complete SSC, either resident or nonresident. Opportunities for educational fellowships are also available and can grant MEL SSC accreditation in lieu of attendance at an SSC. All colonels should pursue/complete a joint qualification, which consists of two parts: an education component and an experience component. Officers meet the education requirement by completing the 10-week JPME II course or resident SSC attendance at any service war colleges. The requirement for joint qualification is not waiver-able. An officer meets the experience requirement by serving an assignment in a joint billet for a prescribed time (usually 36 months, but less for combat and hardship assignments). Officers can apply for experience-based credit in lieu of assignment but must demonstrate significant interaction with joint or interagency actors/organizations. Colonels interested in experience-based credit should work closely with their HR manager at the Senior Leader Development Office to ensure compliance with the most current waiver rules and request format. Engineer colonels selected for brigade-level command must attend the Army, Branch, and functional PCCs.

(2) Assignment

(a) Key developmental. Selection for colonel-level command is highly competitive. Promotable engineer lieutenant colonels and colonels with less than 27 years of active federal commissioned service are eligible to compete for colonel-level command during the Command Selection Board. Selection is based primarily on the officer's overall performance, demonstrated potential to lead larger organizations, experience, and qualifications. A centralized selection board selects officers based on HQDA guidance for USAR, and the ARNG State selects officers for command positions. Slating for command is dependent upon the officer's component and duty status. Officers should review the annually published MILPER carefully to determine their eligibility.

(b) Developmental/broadening. The objective of colonel assignments is for officers to continue to provide strategic value to the Regiment, the Army, and our nation based on their unique experiences and qualifications. Assignments include organizations and duties beyond those discussed in earlier sections. The spectrum of possible assignments is broad and is characterizedas highly responsible, important, and requiring mature, skilled, and well-rounded officers.

(3) Self-development. Engineer colonels must continue refining and building upon their technical

competence using self-development. Various professional reading lists and doctrinal publications are available that officers should use to generate discussion in professional development sessions and self-assessment tools to increase self-awareness. To remain current in emerging technologies and ideas, engineer colonels should hold leadership positions and be chief contributors within professional/technical organizations.

(4) Desired experience. Engineer colonels are subject matter experts within any organization to which they are assigned.

Figure 4: USAR Flexible Career Path

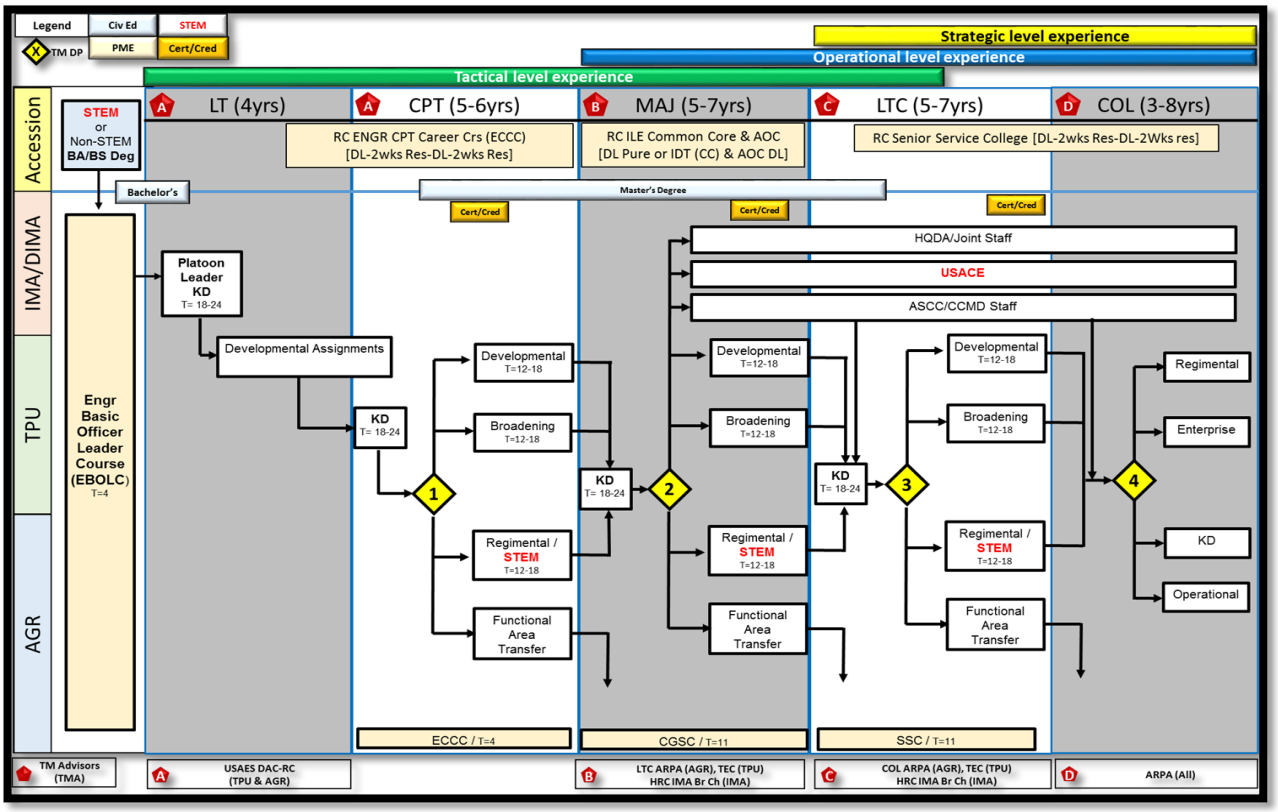
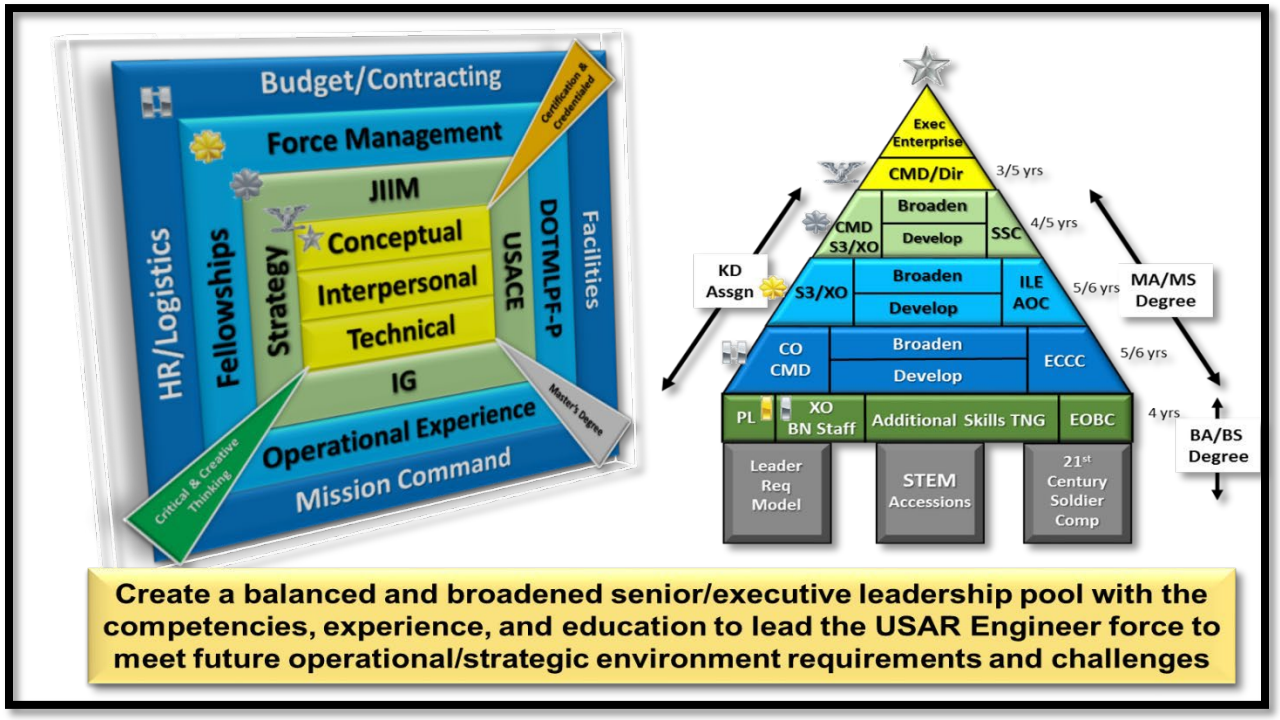


Figure 5: USAR Talent Management Methodology



6. Direct Commission

a. Background. The National Defense Authorization Act of 2019 allows the US Army to direct commission officers up to the rank of Colonel in all branches and career areas. This unique provision allows qualified US citizens an opportunity to serve their nation as a Commissioned Officer in the Active Army, Army Reserve, or Army National Guard as experts in their field. Typically, the Army considers awarding a direct commission to a nominee with an undergraduate degree, relevant technical expertise, and special skills.

b. Authority. The Army Directive 2019-27 under the NDAA 2019 is the guiding reference for officers' direct appointment up to the grade of colonel. The directive applies to the Regular Army, Army National Guard/Army National Guard of the United States, and the US Army Reserve. This directive does not apply to the inter-Service or inter-component transfers pursuant to Department of Defense (DoD) Instruction 1300.04 (Inter-Service and Inter- Component Transfers of Service Members)

c. Utilization. The US Army Engineer Regiment utilizes this expanded capability to authorize constructive service credit for highly skilled civilian engineers and architects with relevant private sector training and experience. The utilization is limited to the ranks of Lieutenant (LT) through Major (MAJ). The Army assigns officers who commission under this authority to technical engineer positions authorized in the Army National Guard or Army Reserve. Direct appointment to the Active-Duty component is on a case-by-case basis and under special circumstances determined by the US Army Engineer School (USAES) Commandant. Officers who wish to transfer to the Active-Duty component after their initial obligation in the Reserve Components apply through the appropriate human resource office. Non-Commissioned Officers currently serving in the reserve component who possess advanced technical degree and experience may apply to the Direct Commissioning (DC) Board under a case-by-case basis and as determined by the Proponent.

d. Proponent. The Engineer Personnel Development Office (EPDO) is the proponent for managing the application life cycle process. In coordination with the Office of the Chief of Engineer (OCE) Reserve Integration & Talent Management Branch and the Direct Commission Working Group members, the Proponent collaborates and defines the Engineer Direct Commission Board's application process. The USAES Commandant selects senior engineer officers to serve as members of the direct commissioning board.

e. Officer development model. The direct commission model for officers who received their commission under the fiscal year 2019 National Defense Authority Act is focused more on the Professional Military Education (PME) requirement for the rank of Lieutenant through Major. Directly appointed officers to attend the appropriate level of PME under the constructive serve credit entry grade.

Figure 6. Direct Commission Officer's Development Model

PROPOSED ENGINEER OFFICER DIRECT COMMISSION DEVELOPMENT MODEL

Years → 0 → 3 / 4 → 9 / 10 → 16 / 17

RANK	LT	CPT	MAJ
Professional Military Education (PME)	BOLC A (6 weeks) BOLC B (19 weeks)	BOLC A (6 weeks) BOLC B (19 weeks) ECCC	BOLC A (6 weeks) Transition Course (2-4 weeks) ECCC CGSOC/ ILE
Functional Training	Sapper, Ranger, Airborne, Air Assault, Stryker Leaders, Bradley Leaders, CEHP, UMBC, ISC		
		Joint Engineer Operations Course (JEOC), Acquisition Certified	
		USACE PROSPECT Program	
		Scholarships, Internships, Fellowships	
		Joint Interagency Multinational Planners Course (JIMPC)	
Credentials/ Certifications/ Skill Identifiers	Engineer in Training (EIT)		
	Facilities Planner (W1), Geographic information System Professional (GISP), Geospatial Engineer Officer (W2), Licensed Engineer Officer (W3), Degree Engineer (W4), Construction Project Engineer Manager (W5), Construction Quality Assurance Officer (W6), Energy Environmental Officer (W7), Facilities Engineering (W8)		
	Marine Engineer Diving Officer (5V)		Installation Management (6Y)
Developmental and Broadening Assignments	Company Construction Officer Battalion Staff USACE Project Engineer/Project Manager Geospatial Engineer FEST-A or FEST-M Engineer Facilities Planner Construction Quality Assurance Officer Facilities Engineer Electrical Engineer Environmental Officer Mechanical Engineer	Construction Management Officer Civil Engineer Construction Engineer USACE Project Officer/Project Manager Geospatial Engineer FEST-A or FEST-M Engineer Facilities Planner Construction Quality Assurance Officer Facilities Engineer Electrical Engineer Environmental Officer Mechanical Engineer Topographic Engineer	Civil Engineer Architecture USACE Project Manager Forward Engineer Support Teams (FEST-A or FEST-M) Geospatial Planning Cell Officer Facilities Planner Construction Quality Assurance Officer Facilities Engineer Electrical Engineer Environmental Officer Topographic Engineer Safety Engineer Real Property Engineer

Figure 6.a. Direct Commission Knowledge, Skills, and Behaviors (KSB) Company Grade

Company Grade  Lieutenants  Captain

KNOWLEDGE: The Engineer Regiment strongly desires officers with academic backgrounds in the domain-specific disciplines listed below, with emphasis on degrees accredited by the Accreditation Board for Engineering and Technology (ABET), the National Architectural Accrediting Board (NAAB), the Landscape Architecture Accreditation Board (LAAB), the Planning Accreditation Board (PAB), and the American Council for Construction Education (ACCE). These disciplines provide foundations in scientific, design, and management methods that support mission-related problem solving. Company grade officers have training and experience in leading organizations of approximately 30 people.

SKILLS: The Engineer Regiment is looking for candidates to become tactical and technical warriors devoted to providing maneuver commanders and ground forces with freedom of action at every echelon. Engineer officers have unique opportunities to enhance their leadership talents and development through military schools, credentialing/certification programs, and advanced civil schooling exclusive to the Engineer Regiment. Collectively, these skills make Engineer officers superb project managers and tenacious problem solvers capable of operating in ambiguous environments solving the nation's toughest problems.

BEHAVIORS: Engineer Regiment officers are both mentally and physically tough. They are problem solvers, good communicators, detail focused, analytical, logical, innovative, and physically fit. Engineer leaders determine requirements, develop work processes, choose between best practices and unorthodoxed approaches to reach solutions, delegate responsibilities, communicate efficiently both written and verbally, use reason and critical thinking, meet high physical demands, and lead teams to desired outcomes.

Education and Training:	**Certifications/Special Skills include:**
Minimum is BS degree and most desired is MS degree and training in Architectural Eng, Civil Eng, Mechanical Eng, Electrical Eng, Systems Eng, Environmental Eng, Geological, Geotechnical, Environmental Design, Landscape Architecture, Project Management, GIS, Remote Sensing, Cartography, Geodesign, Geography w/GIS track, Data Science/Engineering, Informatics & Computing or Geology.	• GEOINT Professional • Professional Engineer (PE) • Project Manager Professional (PMP) • Facilities Planner • Construction Quality Assurance

Figure 6.b. Direct Commission Knowledge, Skills, and Behaviors (KSB) Field Grade

Field Grade - Major 

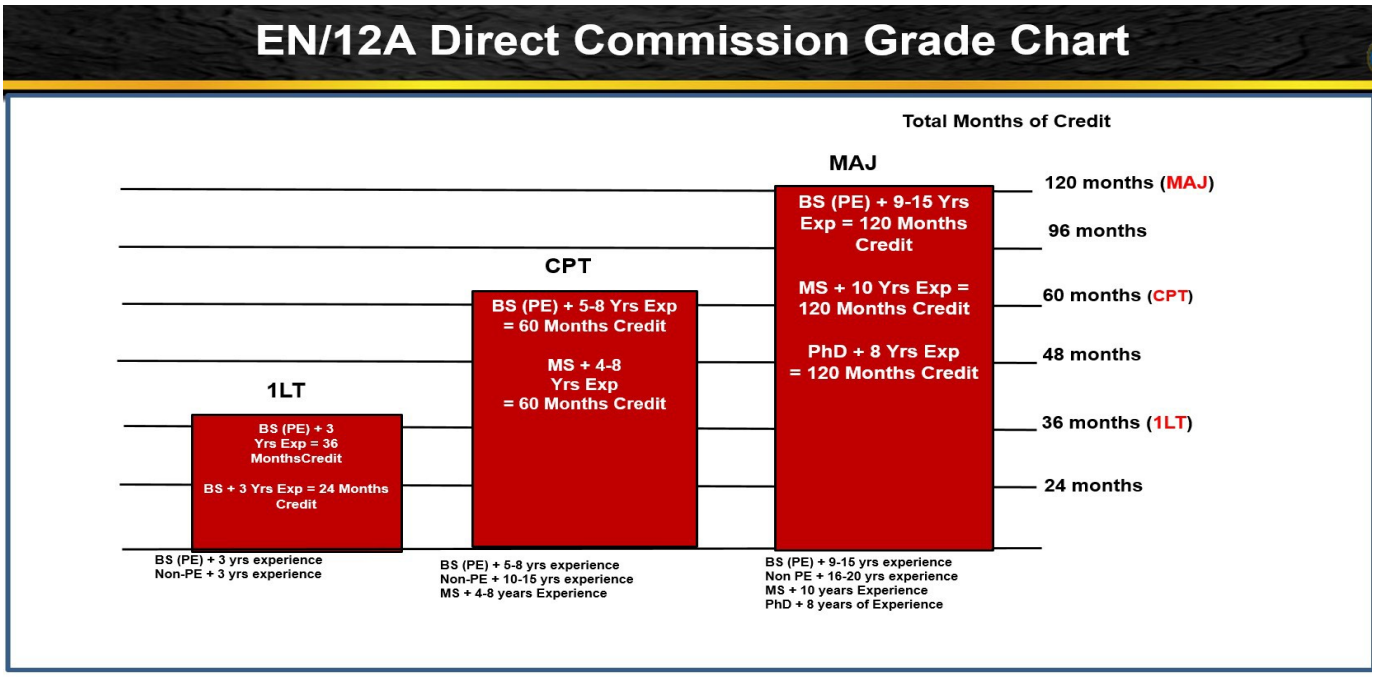
KNOWLEDGE: The Engineer Regiment strongly desires field grade officers with degrees accredited by the Accreditation Board for Engineering and Technology (ABET), the National Architectural Accrediting Board (NAAB), the Landscape Architecture Accreditation Board (LAAB), the Planning Accreditation Board (PAB), and the American Council for Construction Education (ACCE). Engineer Regiment field grade officers possess requisite tactical, operational, and strategic knowledge to work within multiple domain operations. Officers in this grade understand sphere, means, and limits of influence.

SKILLS: Engineer Regiment field grade officers possess the ability to plan, organize, and execute battalion and brigade level operations, collaborate and work with division, corps, HQDA, joint, or non-governmental agencies. Field grade officers have experience in decision making, multi-tasking, building relationships, and adapting to any environment. They possess good oral and written communication skills, verbal reasoning, analytical thinking, active listening, and team-building skills. These officers have experience in resolving conflict, allocating and managing resources, making sound judgement, and extending influence in coaching, mentoring, and counseling. Engineer officers in these grades have experience in Brigade Combat Teams, Echelon Above Brigade units, or within U.S. Army Corps of Engineers.

BEHAVIORS: Engineer Regiment officers are both mentally and physically tough. They are problem solvers, good communicators, detail focused, analytical, logical, innovative, and physically fit. Engineer leaders determine requirements, develop work processes, choose between best practices and unorthodoxed approaches to reach solutions, delegate responsibilities, communicate efficiently both written and verbally, use reason and critical thinking, meet high physical demands, and lead teams to desired outcomes.

Education and Training:	**Certifications/Special Skills include:**
Graduate degree and training in Architectural Eng, Civil Eng, Mechanical Eng, Electrical Eng, Systems Eng, Environmental Eng, Geological, Geotechnical, Environmental Design, Landscape Architecture, Project Management, GIS, Remote Sensing, Cartography, Geodesign, Geography w/GIS track, Data Science/Engineering, Informatics & Computing or Geology.	• Geospatial Engineer • Professional Engineer (PE) • Engineer Degree • Project Manager Professional (PMP) • Facilities Planner • Construction Quality Assurance

Figure 6.c. Direct Commission Grade Chart



- Candidates must meet the Army Combat Fitness Test standards (ACFT).
- Non-Professional Engineer (PE) candidates refer to all other Engineer related degrees and certifications.

7. Reserve Component Warrant Officer Development

a. Unique knowledge and skills of the engineer warrant officer. Engineer warrant officers are adaptive and experienced leaders, expert technicians, and warfighters. They have technically-unique skills, knowledge, and behaviors that require continual professional development through progressive training and education levels. The engineer warrant officer provides the commanders and staff with expert technical and tactical advice on construction management, survey and design operations, power production and distribution systems, terrain analysis, and geospatial information and services across a broad spectrum of engineering operations. As highly specialized technicians, engineer warrant officers support a multitude of Army missions at all levels throughout their career. Complete listings of available engineer warrant officer positions can be found on the FMSWeb and Army Career Tracker websites.

b. Engineer branch warrant officer military occupational specialties (MOSs). Engineer warrant officers are highly skilled technicians who provide sound technical advice to commanders and staff based on expert analysis, experience, and an in-depth understanding of the challenge at hand. The following are MOSs for the Engineer Branch warrant officers: 120A – Construction Engineering Technician and 125D Geospatial Engineering Technician.

(1) MOS 120A – Construction Engineering Technician Reserve Component Warrant Officer.

Serves as the subject matter expert (SME) on construction operations, survey and design, electrical engineering, and project management in a multifunctional capacity across the broad and diverse spectrum of engineering operations in both operational and non-operational units. Construction Engineering Technicians are tasked with providing commanders and staff with expert technical advice on theater of operations construction, maintenance, repair and lifecycle management of vertical and horizontal infrastructure, construction operations, maintenance and repair of deployable hospital facilities and utilities, environmental concerns, project management, military construction (MILCON) management and warrant officer training strategies. Serves as an advisor on capabilities and limitations to engineering operations and coach, teach, mentor, and evaluate engineer Soldiers on all

matters related to construction engineering operations.

(2) MOS 125D Geospatial Engineering Technician Reserve Component Warrant Officer.

(a) Serves as the subject matter expert (SME) on terrain analysis and Geospatial Information and Services (GI&S). Responsible for the generation, management, analysis, and dissemination of geospatial data and products for use in Army Mission Command Systems and aids the commander and staff in visualizing the terrain and understand its impact on all military operations. The geospatial technical expert collaborates with the planning staff and participates in each step of the Military Decision Making Process.

(b) Serves as an advisor on capabilities and limitations to geospatial engineering operations and coach, teach, mentor, and evaluate engineer Soldiers on all matters related to geospatial engineering operations.

c. Reserve Component Career Management. Career management is of critical importance to RC warrant officers.

(1) Army National Guard (ARNG).

(a) ARNG warrant officer career management is the state Adjutant General's responsibility (AG).

(b) The ARNG communicates DA policy to the state AG in all matters concerning warrant officer career management (see NGR 600-101, Warrant Officer Federal Recognition and Related Personnel Actions).

(c) Leader development is a primary command responsibility. Commanders at all levels assist in the administration of Warrant Officer Leader Development Action Plan (WOLDAP) ARNG by coordinating with the officer personnel manager to develop and properly guide the career of each officer in their command; recommending assignments according to qualifications, aptitudes, potential, and desires of their officers; serving as mentors; conducting periodic evaluations and counseling; and recommending leader development schools and training.

(d) Organization personnel officers, especially at battalion level, play a vital role in ARNG warrant officers' career management. The responsibilities of the personnel officer include maintaining liaison with the officer personnel manager, assisting warrant officers in maintaining their records, counseling warrant officers concerning requirements for designation of MOS, and making recommendations to the commander and the Military Personnel Management Office ARNG for changes to the personnel status of warrant officers.

(e) Warrant officers have the final responsibility for ensuring they are progressing satisfactorily in their professional development. They establish goals and evaluate progress, making necessary adjustments to achieve personal goals and professional proficiency.

(f) The Army Military Human Resource Records for all ARNG warrant officers are maintained at ARNG. The appropriate state AG office maintains a field MILPER record jacket for each warrant officer.

(2) US Army Reserve (USAR).

(a) Commanders and assignment officers are charged with the duty of developing professionally competent USAR warrant officers by consistently providing meaningful training opportunities for the warrant officers within their area of management responsibility. The assignment officer has training programs available to provide a balance of military experience during each USAR warrant officer’s career.

(b) The Troop Program Unit (TPU) is one important training vehicle. In the TPU, warrant officers gain the operational assignment experience necessary for leader development. In this area, commanders must be closely involved with their subordinate warrant officers' developmental process by offering progressive and sequential assignments and ensuring to develop the appropriate skills, knowledge, and attributes.

(c) USAR maintains the balance between assignments to TPUs and assignments within the Individual Mobilization Augmentee (IMA) and Individual Ready Reserve (IRR).

(d) In the IRR, the warrant officers can update their backgrounds by training with the RA in progressive career field assignments. This type of assignment is called “counterpart training.” IMA assignments may also be available.

c. Warrant Officer One Development

(1) Entry Level Education. A warrant officer selection board selects engineer warrant officers following a thorough assessment of their technical and tactical competencies in the applied-for career field. Upon selection to become a warrant officer, all candidates must graduate from the Warrant Officer Candidate School (WOCS). WOCS provides candidates with an understanding of the basic skills and behaviors essential in developing an effective Army Warrant Officer. WOCS completes two phases: Phase I is available through Distance Learning (DL) and Resident, while Phase II is a 5-week resident course at Fort Rucker, AL. All AC and RC warrant officer candidates must attend the resident WOCS or the two-phased regional training institute run by State ARNG.

(2) Basic Education. After completing WOCS, WO1s must attend their MOS-specific Warrant Officer Basic Course (WOBC). Appointment to WO1 is contingent upon certification by the US Army Engineer School's Personnel Development Office after completing the Candidate's respective WOBC.The Engineer WOBC certifies warrant officers as technically and tactically competent officers able to serve in the Engineer Regiment. Construction engineering and geospatial engineering technicians receive education, training, and the core skills necessary to lead engineering operations successfully. Graduates of the WOBC receive qualifications in the following areas:

(a) 120A Construction Engineering Technician. The 120A WOBC consists of supervising, managing, and coordinating general engineering projects such as survey and design operations, vertical construction projects, horizontal construction projects, and force protection efforts; plan and manage the construction of utility systems; determine, plan, and employ tactical electrical power systems; manage construction programs, power generation plants, and facility maintenance programs while integrating with staff operations from the battalion level down through the Military Decision Making Process (MDMP).

(b) 125D Geospatial Engineering Technician. The 125D WOBC consists of managing geospatial engineering operations, doctrine, emerging geographic information systems and technology,and Army operations. It emphasizes managing geospatial information and services products in support of MDMP at the brigade level.

(3) Desired Experience. Engineer Warrant Officer Basic Course graduates must attain and maintain basic-level competence and certification in their MOS technical skills. Continued education, training, and experience in basic-level technical engineering operations prepare the warrant officer for future assignments and selection to the next higher rank.

(4) Assignment. Upon completing the MOS WOBC, the warrant officer can expect junior-level developmental assignments within their specialty, as depicted in the engineer warrant officer career path. These assignments give the junior warrant officer a solid foundation of experience and depth to build off and prepare for assignments at higher levels. Geographic constraints may cause RC Warrant Officers assignments to positions coded above their grade.

(a) 120A Construction Engineering Technician ARNG Assignments. WO1s serve in:

- Brigade Engineer Battalions
- Echelons Above Brigade Battalions
- Engineer Construction Companies (ECC)
- Engineer Vertical Construction Companies (EVCC)
- Utility Detachments, Facility Detachments
- Special Forces Groups
- Joint Force Headquarters
- Security Forces Assistance Brigades (SFAB)
- Engineer Support Companies (ESC)

(b) 120A Construction Engineering Technician USAR Assignments. WO1s serve in:

- Echelons Above Brigade Battalions
- Engineer Construction Companies (ECC)
- Engineer Vertical Construction Companies (EVCC)
- Utility Detachments
- Engineer Support Companies (ESC)

(c) 125D Geospatial Engineering Technician ARNG Assignments. WO1s serve in:

- Engineer Brigades
- Brigade Combat Teams
- Cavalry Regiments
- Sustainment Brigades

(d) 125D Geospatial Engineering Technician USAR Assignments. WO1s serve in:

- Engineer Brigades
- Sustainment Brigades

(5) Self Development. Self-development should include distance learning courses, functional courses, civilian education, and Army leader professional reading lists. The junior warrant officer should devote time to improving both their MOS technical comprehension and their warfighting competencies. Engineer Branch recommends that civilian education objectives include a degree or certification plan that aligns with and enables their technical proficiency.

d. Chief Warrant Officer Two Development.

(1) Basic-Level Education. No institutional training requirement.

(2) Desired Experience. Assignment experience and mastering basic skills are fundamental to the development of junior warrant officers. CW2s are expected to begin mastering their particular functional MOS and refining the technical and tactical knowledge required to perform at the next higher grade. Junior warrant officers should focus on pursuing and excelling at developmental positions to maintain competence and enhance MOS technical skills.

(3) Assignments. Engineer warrant officers can expect and should seek out assignments of increased responsibility to refine the knowledge, skills, and experience gained from previous assignments and training. See Figures 2 and 3 for additional details. Geographic constraints may cause RC Warrant Officers to be assigned to positions coded above their grade.

(a) 120A Construction Engineering Technician ARNG Assignments. CW2s serve in:

- Brigade Engineer Battalions
- Echelons Above Brigade Battalions
- Engineer Construction Companies (ECC)
- Engineer Vertical Construction Companies (EVCC)
- Utility Detachments, Facility Detachments
- Special Forces Groups
- Joint Force Headquarters
- Security Forces Assistance Brigades (SFAB)
- Engineer Support Companies (ESC)

(b) 120A Construction Engineering Technician USAR Assignments. CW2s serve in:

- Echelons Above Brigade Battalions
- Engineer Construction Companies (ECC)
- Engineer Vertical Construction Companies (EVCC)
- Utility Detachments
- Engineer Support Companies (ESC)

(c) 125D Geospatial Engineering Technician ARNG Assignments. CW2s serve in:

- Engineer Brigades
- Brigade Combat Teams
- Cavalry Regiments
- Sustainment Brigades

(d) 125D Geospatial Engineering Technician USAR Assignments. CW2s serve in:

- Engineer Brigades
- Sustainment Brigades

(4) Self Development. CW2s should continue to build upon and refine their personal and professional competencies by seeking out self-development opportunities. Degree plans and professional certifications that complement relevant technical skills broaden the warrant officer's perspective and technical comprehension.

e. Chief Warrant Officer Three Development

(1) Advanced-Level Education. Warrant Officer Advance Course (WOAC) focuses on advanced technical training and common core engineer leader development skills designed to increase overall knowledge and prepare the warrant officer for assignments in Field Grade Technical Engineering positions.

(a) 120A Construction Engineering Technician. The 120A WOAC consists of training on the development of base camp master planning, the deployable medical systems (DEPMED) found in Army Field and Combat Support Hospitals, supervise the planning of facility construction, operations and maintenance, and engineer common leader skills.

(b) 125D Geospatial Engineering Technician. The 125D WOAC consists of integrating geospatial engineering operations, doctrine, emerging geographic information systems and technology, and Army operations. It emphasizes integrating geospatial information and services products to support MDMP at the division, corps, and Army Service Component Command (ASCC) levels.

(2) Desired Experience. Engineer warrant officers at this level must possess the expertise and the requisite senior-level proficiency to perform next to Army senior leaders. Senior-level Engineering Technicians provide leader development, mentorship, and sound technical advice to commanders, staff, NCOs, officers, and fellow warrant officers. CW3s must be knowledgeable and capable of providing technical guidance on operational level planning efforts while forecasting and integrating systems at multiple levels across formations.

(3) Assignments. Engineer warrant officers can expect and should seek out assignments of increased responsibility to refine the knowledge, skills, and experience gained from previous assignments and training. Geographic constraints may cause RC Warrant Officers to be assigned to positions coded outside their grade.

(a) 120A Construction Engineering ARNG Assignments. CW3s serve in:

- Engineer Brigades
- Maneuver Enhancement Brigades (MEB)
- Forward Engineer Support Teams

(b) 120A Construction Engineering USAR Assignments. CW3s serve in:

- Engineer Brigades
- Army field and combat support hospitals
- Prime Power Battalion
- Theater Support Group (TSG)
- Maneuver Enhancement Brigades (MEB)
- Signal Command

(c) 125D Geospatial Engineering ARNG Assignments. CW3s serve in:

- Division

(d) 125D Geospatial Engineering USAR Assignments. CW3s serve in:

- Theater Engineer Command (TEC)

(4) Self Development. Engineer warrant officers at this level have developed an advanced level of technical and tactical proficiency to prepare them to serve as senior-level managers and integrators within their specialty. Engineer Branch encourages CW3s to seek assignment-oriented training focused on future positions to enhance the warrant officer's duty performance. CW3s should refine and perfect their communication skills in preparation for high-level operational and strategic level positions. The distributed learning (DL) portion of the Joint Engineer Operations Course (JEOC) is a prerequisite for the Engineer WOILE-FO.

f. Chief Warrant Officer Four Development.

(1) Senior-Level Education. The Warrant Officer Intermediate Level Education-Follow On (WOILE-FO) provides technical skills necessary to integrate their expertise in support of leaders as staff officers, trainers, managers, systems integrators, and leaders at the tactical and operational levels of Army, Joint,Interagency, Intergovernmental, and Multinational (JIIM) organizations executing Unified Land Operations thru Decisive Action.

(a) 120A Construction Engineering Technician. 120A WOILE-FO consists of training on area

development working groups, integrating engineer support to protection efforts, programming facility construction and maintenance at installation level (MILCON), employment of electrical systems across Theater of Operations and Army force management principles at Corps level and above.

(b) 125D Geospatial Engineering Technician. The 125D WOILE-FO consists of training to advise senior leaders on geospatial engineering operations, doctrine, emerging geographic information systems and technology, and Army operations. It emphasizes the identification and solution development for geospatial engineering operation DOTmLPF-P gaps and preparation for support at the Army Service Component Command (ASCC) and strategic levels.

(2) Desired Experience. Engineer warrant officers at this level must possess the expertise and the requisite senior-level proficiency to perform next to Army strategic leaders. Senior-level Engineering Technicians provide leader development, mentorship, and sound technical advice to commanders, staff, NCOs, officers, and fellow warrant officers. CW4s must be knowledgeable and capable of providing technical guidance on strategic level planning efforts while forecasting and integrating systems at multiple echelons across DoD and JIIM organizations.

(3) Assignments. Engineer warrant officers can expect and should seek out assignments of increased responsibility to refine the knowledge, skills, and experience gained from previous assignments and training. Geographic constraints may cause RC Warrant Officers to be assigned to positions coded outside their grade.

(a) 120A Construction Engineering ARNG Assignments. CW4s serve in:

- Divisions, Combined Joint Training Facility (CJTF)
- Joint Force Headquarters (JFHQ)
- Theater Sustainment Command

(b) 120A Construction Engineering USAR Assignments. CW4s serve in:

- Theater Engineer Command (TEC)
- Readiness Division
- Theater Sustainment Command

(c) 125D Geospatial Engineering ARNG Assignments. None.

(d) 125D Geospatial Engineering USAR Assignments. CW4s serve in:

- Theater Engineer Command (TEC)

(4) Self Development. To stay relevant and continue refining their knowledge engineer depth, warrant officers should seek senior MOS technical expertise, knowledge, and experience. Take advantage of opportunities to participate in fellowships, strategic broadening seminars, and MOS specialty training.

g. Chief Warrant Officer Five Development.

(1) Master-Level Education. No MOS-specific institutional training. Engineer Branch expects all engineer CW5s to complete WOSSE, an immaterial branch course that provides master-level warrant officers with a broader level perspective required for assignment to CW5 positions.

(2) Desired Experience. Engineer CW5s are master-level technical and tactical experts and provide leader development, mentorship, and sound technical advice to commanders, staff, NCOs, officers, and fellow warrant officers. CW5s have special mentorship responsibilities for other Warrant Officers at all levels and are responsible for providing essential advice to commanders on technical and Warrant Officer issues. Engineer CW5s must become familiar with Army and Engineer organizational roles, functions, and missions, especially at the ACOM and Army staff levels and with the force management process.

(3) Assignments. Engineer CW5s serve in strategic and branch immaterial assignments. As master-level engineering technicians, CW5s serve at the highest levels within their specific MOS. CW5s also begin to serve on a broader variety of strategic assignments.

(a) 120A Construction Engineering ARNG Assignments. CW5s serve in:

- The United States Army Engineer School (USAES)

(b) 120A Construction Engineering USAR Assignments. CW5s serve in:

- The Theater Engineer Command (TEC)
- Reserve Command Support Group

(c) 125D Geospatial Engineering ARNG Assignments. None.

(d) 125D Geospatial Engineering USAR Assignments. None.

(4) Self Development. Devoting time to developing a broader understanding of all aspects of Army engineering and engineer force structure is recommended. Engineer CW5s should sharpen their knowledge of personnel force integration functions for doctrine, training, and personnel about engineer functions. In addition, CW5s should become familiar with the constitutional, statutory, and regulatory basis for the force projection for the Army and the capabilities sustained through the management of doctrinal, organizational, and materiel change.

Figure 4 – 120A RC/NG Construction Engineering Technician Career Assessment tool

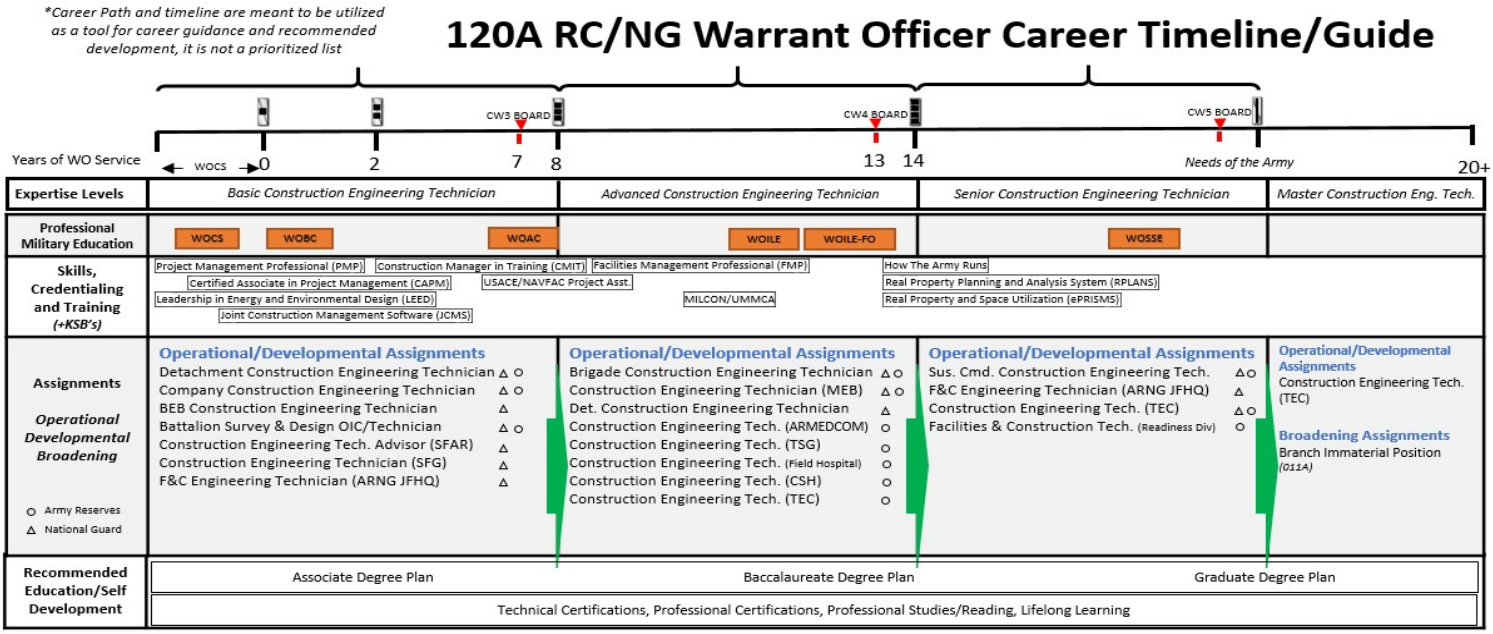


Figure 5 – 125D RC/NG Construction Engineering Technician Career Assessment tool