Air Force

Civil Engineer

ALMANAC 2018

Vol. 26 No. 3

By Engineers. For Engineers.

Air Force Civil Engineer ALMANAC

Vol. 26 No. 3 Winter 2018

AIR STAFF

AFIMSC

MAJOR COMMANDS

MAJOR COMMANDS

PSU/DRU

Unless otherwise noted, facts and figures presented are based on information submitted to the Air Force Civil Engineer magazine office, current as of Oct. 1, 2018.

Air Force Civil Engineer
By Engineers. For Engineers.

Air Force Civil Engineer is published quarterly by Air Force Civil Engineer Center Public Affairs. This publication serves the Office of The Civil Engineer, HQ U.S. Air Force, Washington, D.C. Readers may submit articles, photographs, and artwork. Suggestions and criticisms are welcomed. All photos are U.S. Air Force, unless otherwise noted. Contents of *Air Force Civil Engineer* are not necessarily the official views of, or endorsed by, the U.S. government, the Department of Defense, or the Department of the Air Force. Editorial office: *Air Force Civil Engineer*, AFCEC/PA, 2261 Hughes Ave., Ste. 155, JBSA Lackland, TX 78236-9853, and e-mail: AFIMSC.PA.Workflow@us.af.mil. All submissions will be edited to conform to standards set forth in Air Force Instruction 35-101, The Associated Press Stylebook and the magazine's internal style. Air Force Civil Engineer is accessible on the Internet from AFCEC's home page: http://www.afcec.af.mil. Individual subscriptions available via GPO (http://bookstore.gpo.gov).

Directorate of Civil Engineers Leaders

Brig. Gen. John Allen is the Air Force director of civil engineers, deputy chief of staff for logistics, engineering and force protection, headquarters U.S. Air Force, Directorate of Air Force Civil Engineers, Pentagon, Washington, D.C. He is responsible for providing policy and oversight for the planning, development, construction, maintenance, utilities and environmental quality of 183 Air Force bases worldwide, valued at more than $297 billion. This responsibility includes housing, fire emergency services, explosive ordnance disposal and emergency management services. He also influences resourcing for installation support functions with an annual budget of $11 billion and is the focal point for organizing, training and equipping the 51,000-person engineering force. General Allen entered active duty in 1992. He has served in a variety of squadron-level civil engineer assignments as well as assignments on wing, major command and the Headquarters Air Force staff. In addition, he has commanded at the squadron, group, and wing levels. Prior to service as the director of civil engineers, he was the director of staff for Headquarters Air Force Materiel Command at Wright-Patterson Air Force Base, Ohio.

Nancy Balkus is the deputy director of civil engineers, deputy chief of staff for logistics, engineering and force protection, headquarters U.S. Air Force, Directorate of Air Force Civil Engineers, Pentagon, Washington, D.C. She is responsible for supporting the director of civil engineers by providing executive leadership, direction and technical knowledge for installation support functions. She is also responsible for organizing, training and equipping the engineering force and providing policy and oversight for the planning, development, construction, maintenance, utilities and environmental quality of Air Force bases worldwide.

Ms. Balkus is a 1988 graduate of the U.S. Air Force Academy. Prior to her current assignment, she served as the deputy director of the export control and interagency liaison division at the National Aeronautics and Space Administration Headquarters, in the Office of International and Interagency Relations. As a civil engineer, she has served as the programs division deputy chief in the office of the civil engineer at Headquarters U.S. Air Force, deputy base civil engineer at Joint Base Langley-Eustis, Virginia, deputy chief of readiness at Headquarters Air Combat Command, project management branch chief for the Aviano 2000 Program Management Office, and multiple positions at the former Air Force Center for Engineering and the Environment at the former Brooks AFB, Texas.

Chief Master Sgt. Randall L. Youngblood is the chief of enlisted matters and civil engineer career field manager, headquarters, U.S. Air Force, Directorate of Air Force Civil Engineers, Pentagon, Washington, D.C. He represents the highest enlisted level of leadership within the civil engineer enterprise. He advises the director of civil engineers on matters affecting the civil engineering workforce with specific emphasis on readiness, morale, retention, training and workforce utilization. He serves as the functional manager for all enlisted and wage-grade civilians in civil engineering. He also chairs the Air Force Civil Engineer Chiefs' and Airmen's councils to review issues affecting the workforce, communicate ideas and develop recommendations for senior leadership consideration.

Chief Youngblood previously served as the civil engineer functional manager at the Air Force Installation Mission Support Center Detachment 1 at Peterson AFB, Colorado. Chief Youngblood grew up in Osage, Arkansas, and entered the Air Force in December 1990. His previous assignments consist of Oklahoma, South Korea, Japan, Germany and Florida. His deployments include Balad, Tikrit and Tal Afar, Iraq; Bagram and Dwyer, Afghanistan.

CEs must continue to set the bar higher

In my first few months serving as your director of civil engineers, I have had the pleasure of working with and learning from many individuals in our incredibly diverse and impressive civil engineering field. In 2018, we set new standards and achieved new heights across the CE enterprise. However, the stakes are now higher than ever to protect our nation's security. We must collectively set our sights on higher standards and greater heights in 2019.

To maintain our air dominance and force lethality, we must focus our efforts on three strategic priorities: (1) restoring readiness, (2) revitalizing our squadrons and, (3) continuing to innovate and modernize. By aligning ourselves to these three priorities, the CE enterprise will continue to strengthen Airmen engineers who pioneer advances to our military capabilities and ensure the safety and security of our Air Force installations, at home and abroad.

In addition to these priorities, I value a collaborative dialogue with you in the field. In a military environment where unique threats are challenging our nation's security, we must ensure that Air Force civil engineers are prepared and eager to drive innovation for this enterprise. I assure you that my eyes and ears are open in order to provide you with what you need to combat distinct threats to this nation's security.

Each edition of the CE Magazine gives a voice to the field and provides the impetus for a unique dialogue to take place within our community. We regularly read about engineers who embody CE's core values and execute the mission of our enterprise in remarkable ways. This particular edition gives insight into the organizational structure and distinctive features of all of our CE components.

I encourage you to internalize each unique detail you discover in this year's CE Almanac. Differences in organization, operations and mission are key to understanding the degree of variation among your civil engineering peers. These differences make for valuable collaboration and will enable us to achieve higher standards and greater heights as a unified enterprise.

I am grateful for your hard work and dedication each and every day. I look forward to a successful 2019. Thank you for all you do.

Very Respectfully,
John Allen
Brigadier General, USAF
Director of Civil Engineers

Development of CEs crucial for sustained growth

It is my distinct honor to serve alongside Brigadier General John Allen as your Deputy Director of Civil Engineers. In the past year, our Civil Engineering enterprise has advanced greatly, and I look forward to supporting you to ensure this upward trajectory continues. I echo Brigadier General Allen when I say that each of your unique voices is critical in addressing what the career field requires to further refine the skills and expertise of our Airmen.

Brigadier General Allen and I believe the deliberate development of all of our Airmen engineers, both military and civilian, is a key component of achieving our sustained growth. Development of a highly-skilled workforce ensures, that even in times of change, our Air Force will remain unwavering and that our competitive edge will never be undermined. As the CE Civilian Functional Manager (FM), I will identify development, training, and education opportunities for the civilians within our functional community, along with consistently advocating at the Air Force level. Additionally, your senior leaders, we are eager to provide you with the right resources to further your careers and prepare you to defeat threats to our national security.

We are preparing you to develop our military capabilities, win our nation's war, and to be the innovative thinkers of tomorrow. There are limitless possibilities as an Airman Engineer and we will work tirelessly to equip you to solve new problems, seize new opportunities, and achieve the impossible. You are critical to today's fight.

The CE Magazine consistently provides us with insight into the vast range of opinion, reflection, and ideas from CE Airmen. The breadth of perspective that CE Airmen offer in each edition of the CE Magazine helps the entire enterprise celebrate our strengths. When you share your triumphs, tribulations, and thoughts, you enable our Civil Engineer community to stay engaged with their fellow Airmen — even if they are miles, states, or oceans away.

This year's edition of the CE Almanac proudly emphasizes the vast diversity in thought, leadership, and organization that Air Force Civil Engineers demonstrate. When we use our diversity to solve problems, innovate, and build teams, we strengthen the CE enterprise and the Air Force writ large. I believe that fostering a diverse and inclusive workspace that celebrates our differences and our variety of strengths will lead us into a successful 2019.

Thank you for your service and your unwavering commitment to this great nation.

Very Respectfully,

Nancy J. Balkus, P.E., SES
Deputy Director of Civil Engineers

CE perspective critical to increasing readiness, leveraging innovation

As your chief of enlisted matters, I am consistently impressed by our enlisted civil engineers. On a daily basis, our engineers who accomplish incredible feats, despite the most challenging environments, are a source of inspiration for myself and others around me. Your drive to succeed and operate in demanding circumstances has manifested itself into new alliances, stronger squadrons, and an overall more powerful civil engineering career field.

In order to continue enhancing our civil engineers, both in garrison and deployed, we continue to focus on increasing readiness, leveraging innovation and technology to help build professional engineers. I echo Brig. Gen. Allen's message in that your voices are key to accomplishing these priorities, and your perspective from the field is invaluable as we work to deliver the best possible training, capability and support to you in the field.

I am proud to introduce the 2018 edition of the CE Almanac. This edition of the CE Magazine serves as a useful resource to understand more about our civil engineering family. This unique edition of the CE Magazine captures our collective achievements and showcases the outstanding work being done across the CE enterprise. As you will read, 2018 has been an exciting and busy year. As we move into 2019 and the years ahead, I look forward to bigger and better accomplishments from our civil engineering career fields.

I am extremely proud of enlisted leadership, mission accomplishments, and advancements in capabilities displayed throughout this edition of the CE Almanac. Please allow that pride to continue because you make this Air Force the best in the world. Thank you.

Very Respectfully,

Randall L. Youngblood
Chief Master Sergeant, USAF
Chief of Enlisted Matters

Headquarters Air Force A4C Divisions

Agile, innovative Airmen engineers operating resilient and right-sized installations

Asset Management / A4CA

Energy Management, A4CAN

The A4C energy program supports the Air Force energy priorities of improving resiliency, optimizing demand and assuring supply. These priorities support the Air Force's vision of "mission assurance through energy assurance," which moves the Air Force toward facility energy that is resilient, cost effective and cleaner. A4CAN works with the Deputy Assistant Secretary of the Air Force for Environment, Safety and Infrastructure (SAF/IEE), Air Force Installation and Mission Support Center (AFIMSC) and Air Force Civil Engineer Center (AFCEC) to ensure policy and guidance, direct and indirect investments, and energy program execution are all in line with the Air Force's goal of energy assurance.

In fiscal 2018, A4C participated in a Mission Assurance Tiger Team tri-chaired by Operations, Plans and Requirements (AF/A3), Logistics, Engineering and Force Protection (AF/A4), and the Secretary of the Air Force for Installations, Environment and Energy (SAF/IE). The Tiger Team developed an action plan to conduct a systems-of-systems approach, utilizing mission thread analyses (MTA) to determine critical nodes and supporting assets requiring uninterrupted energy. The team undertook MTAs on five missions: (1) MQ-9, (2) Basic Military Training, (3) Strategic Missile Warning, (4) F-22 and (5) Air and Space Operations Center. The results of these MTAs will be utilized in the development of a standardized process for conducting future MTAs.

With constrained budgets, the Air Force maintains its emphasis on utilizing third-party programs such as Energy Savings Performance Contracts (ESPCs), Utility Energy Service Contracts (UESCs), Power Purchase Agreements and Enhanced Use Leases to meet Air Force energy goals and objectives. The Air Force is ensuring investments made through these programs will provide significant improvements to the resiliency of Air Force facilities in order to align with guidance from Congress and DoD policy.

Through the third quarter of FY18 the Air Force awarded three ESPCs and one UESC, with a total value of $99 million. These projects included a $42.2 million ESPC at Hill AFB, Utah, an $8.1 million ESPC at Seymour Johnson AFB, South Carolina, and a $20.6 million ESPC at Arnold AFB, Tennessee. The awarded UESC was a $28.3 million project at Robins Air Force Base, Georgia.

The Air Force is continuing its efforts in Utilities Privatization to mitigate energy vulnerabilities, increase energy resiliency and reliability, and ensure mission assurance through energy assurance. To ensure funds are utilized most effectively, UP will be focused on priority or mission-critical installations and addressing life, health and safety issues.

Lastly, the Air Force won seven of the 27 Department of Energy's 2017 Federal Energy Management Program awards. The awards highlight how individuals and teams within the Air Force are implementing both energy-resilient solutions and more energy-efficient operations, along with conserving water resources and generating significant cost savings.

Environmental Management, A4CAE

In FY17, the Air Force environmental program continued to invest in natural infrastructure to maintain regulatory compliance, reduce risk and continuously improve the mission and the environment in alignment with the Secretary of the Air Force (SECAF) and the Chief of Staff of the Air Force priorities. With 203 installations — including base realignment and closure — and 44 range complexes covering 9 million acres, the environmental program manages habitats for 125 threatened and endangered species, 598,000 acres of managed commercial forest, 21,069 archaeological sites and 6,924 historic structures, and ensures engagement and consultation with Native American tribes and native Hawaiian organizations at 104 installations.

The environmental program provides compliance services for infrastructure and industrial operations which include maintaining 453 Clean Water Act and Clean Air Act permits at 161 installations and 154 water systems serving almost a million personnel. It also includes disposing of approximately 7,600 tons of hazardous waste and diverting approximately 862,000 tons of nonhazardous solid waste. The Air Force environmental restoration program continues to show great progress in cleaning up contaminated land and returning it to mission use, achieving 242 response complete actions in FY17 which brings the total response complete actions to 11,300 contaminated sites, or 91 percent complete, to date.

The Office of the Secretary of Defense recognized the Air Force's environmental program with three key environmental awards in FY18:

1. Vandenberg Air Force Base for its environmental cleanup program

2. Frederick Javier at Hurlburt Field, Florida, for environmental compliance efforts

3. Combat Rescue Helicopter program at Wright-Patterson Air Force Base, Ohio, for weapon system hazardous material reduction efforts

In FY18, the Air Force continued to make progress in carrying out actions to identify, respond to and prevent perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) contamination. As of July FY18, the Air Force has identified contamination through the preliminary assessment (PA) and site investigation (SI) process, completing 99.5 percent (202/203) of PAs and 21 percent (39/189) of SIs, with a goal of 100 percent completion by the end of FY19. The Air Force responded with ongoing mitigation of drinking water at 100 percent of the six on-base and 22 off-base locations identified through the PA/SI process, and prevented further contamination by transitioning to C6 aqueous film-forming foam (AFFF) formula, which contains much lower levels of PFOS and PFOA. Air Force fire vehicles and 88 percent of hangars — 100 percent by end of FY18 — have been transitioned to date. The Air Force is also developing AFFF waste management guidance, which will apply to both the new C6 and the old C8 AFFF formulas.

Housing Management, A4CAH

The housing program ensures Air Force families and unaccompanied members are provided quality homes and support services worldwide. The Air Force managed a $318 million operations and maintenance program provided management services, leasing, utilities, maintenance and furnishings for more than 70,000 government-owned and privatized family housing units in FY18. Within this program, the Air Force planned and programmed 114 housing maintenance and repair projects, and programmed for more than $123 million to sustain and modernize the overseas government-owned family housing inventory in the Pacific Air Forces and U.S. Air Forces in Europe/Air Forces Africa major commands.

For family housing in Japan, $80 million worth of construction was planned and prepared for future award. The Air Force is preparing two FY18 projects totaling $134 million, which includes new construction of a permanent party dormitory at Eglin AFB, Florida, and a basic military training dormitory at Joint Base San Antonio, Texas, to support unaccompanied members and meet the DoD's goal to maintain 90 percent of the Air Force dormitory inventory at an adequate rating.

Within the family housing privatization program, 27 of the 32 projects have completed the initial development period, and project owners have completed construction of nearly 22,100 new homes to date — not including renovations. The program has completed over 97 percent of the total development with almost 52,000 new or renovated homes of the 53,239 end state privatized homes. The Air Force is continuing to assess the future disposition of the remaining 100 government-owned homes at Wright-Patterson AFB, Ohio.

The Air Force continues to deploy the Enterprise Military Housing Privatization Evaluation Report module. Enterprise Military Housing is a DoD-mandated system for operations and inventory management of family and unaccompanied housing and furnishings assets. The Air Force has completed deployment of family and unaccompanied housing modules for all locations in the continental United States and overseas. To date, the Air Force has deployed modules to manage and report leasing requirements, general officer cost reports and inventory and utilization of family and unaccompanied housing assets. These modules allow OSD to extract data to support data calls and inquiries from higher echelons. The Air Force is preparing the last two privatized housing modules for deployment in FY18.

Real Property Management, A4CAR

A major area of focus for the asset management division is real property accountability. Throughout FY17, the real property program continued real property asset accountability and financial reporting preparation for the Air Force and DoD Financial Improvement and Audit Readiness (FIAR) assertion. For the Air Force, audit readiness is perpetual. On October 1, 2017, the Air Force entered into auditIn March FY18, the Air Force's independent public accountant began performing site visits to major installations for orientation, observation and assessment of real property inventory fidelity. Under DoD FIAR guidance, real property is considered one of five mission critical assets and a key assessable unit.

Key achievements for Real Property Management include the Real Property Summit — with representation from AF/A4CA, AFCEC, AFIMSC, Air Force Reserve Command, Air National Guard and Deputy Assistant Secretary for Financial Operations which reviewed the status of self-identified deficiencies and corrective action plans and reduced the number of existing CAPs from 25 to nine. Additionally, Real Property transitioned CAP reporting to the Air Force Inspection System's Management Internal Control Toolset, saving the Air Force 14,330 man-hours per month (171,960 man-hours per year).

In support the Secretary of the Air Force's Directive Publication Reduction Initiative, the Integration Table approved consolidating all five real property Air Force Instructions (AFI) and the Environmental Baseline Survey AFI (32-7066) into a single Real Property AFI. The new Real Property AFI is slated to be published in September 2019. The Integration Table also approved a new process for making Real Property Installed Equipment (RPIE) determinations. RPIE determinations have implications for programming and budgeting and this new process will ensure the proper coordination and approval of determinations across the civil engineer enterprise.

The Construction in Progress (CIP) balance is a significant line item on the Air Force's financial statement and, as a result, is also important to financial improvement and audit readiness. Throughout FY17 and into FY18, A4CA refined the Air Force CIP baseline to ensure a higher degree of confidence in the value of reported CIP projects. Memorandums of Understanding for military construction design and construction services have been signed between the Air Force's designated service providers, the U.S. Army Corps of Engineers and Naval Facilities Engineering Command. These MoUs outline the roles and responsibilities agreed upon between the Air Force and their service providers to ensure the fidelity and accurate reporting of CIP.

Facilities Division / A4CF

The Facilities Division has the mission to provide policy, resource advocacy and program oversight for military construction (MILCON), including specified MILCON and unspeci-

fied minor military construction (UMMC); facility sustainment, restoration, modernization and demolition project programming policy; operations management; cyber security of industrial control systems; non-appropriated funds construction; strategic communications and Congressional engagement. The division has reorganized MILCON and Operations and Maintenance into Engineering and Operations to align with civil engineer squadrons and provide better support.

The fiscal 2019 MILCON budget submission declined by 9.5 percent from FY18 to a total of $1.78 billion. The FY19 MILCON program prioritizes weapons system bed-downs and support to combatant commanders, including fifth generation fighter capability in Europe and the Pacific. Half of the MILCON program supports new weapons systems such as the F-35 and KC-46, 13 percent supports combatant command requirements, 21 percent supports both active duty "worst-first" existing mission requirements and Air National Guard/Air Force Reserve Test Center requirements, and 16 percent provides program support, including planning and design and UMMC. While the Air Force was able to address some of the most critical infrastructure recapitalization needs in FY17 and FY18, the service continues to take risk in existing mission facilities investment with a $12 billion backlog in MILCON recapitalization requirements. In response to the FY18 National Defense Authorization Act (NDAA) UMMC limit increases, which were intended to achieve buying power parity through area cost factor adjustments, the FY19 UMMC program has increased modestly to $65.5 million, continuing the incremental UMMC increases of FY17 and FY18.

In FY18, the division continued to oversee facility sustainment, restoration and modernization (FSRM) programming policy in working approval requests and notification to congressional committees for more than 150 repair and unspecified minor construction project packages to include several laboratory revitalization projects. Over the last two years, the (FSRM team secured statutory changes allowing conversion work to be classified as repair and incorporating area cost factors into the cost limits for both unspecified minor construction and UMMC projects in the United States and territories. The team also worked with counterparts in the Office of the Secretary of Defense (OSD) to expand the definition of "repair" and allow any work within existing dimensions to be classified as repair. These significant statutory and policy changes, combined with several others, have greatly expanded the Air Force's authority and capability to use FSRM dollars to optimize installations.

Civil engineer operations management policy is captured in 18 Air Force Instructions (AFIs) and five Air Force manuals. The division is actively updating these publications in response to Secretary of the Air Force guidance released in August 2017 that challenged functional areas to reduce and simplify directive documents by September 2019. The division also revised the civil engineer annual awards program by updating the awards business rules since AFI 36-2817 was rescinded and consolidated into AFI 36-2805.

The civil engineer control system cyber security interim guidance memorandum updates include defining roles and responsibilities for base level, Air Force Civil Engineer Center and Air Staff functions. Additionally, the division successfully defended an increase to the dedicated program element for control system cyber security for FY19. The 2017 NDAA Section 1650 mandated completion of an evaluation of critical infrastructure and development of strategies for risk mitigation. The last year has led to establishing criteria for a four-level assessment process to achieve the services endorsed and OSD-reported requirements. The pilot study kicked off mid-FY18 to refine the methodology, and the division developed a schedule for the next two years to assess the first 28 bases. The division continues to advocate for funding to execute the unfunded mandate to support both the two-year initial effort and the long-term approach to assess 185 total force locations.

Finally, the division steered $218.8 million in non-appropriated funds for major construction projects in FY18. Five morale, welfare and recreation projects account for $11.4 million and four lodging projects account for the remaining $207.4 million. The nine projects are spread across eight states.

In addition to the traditional facilities branches, strategic communication and legislative affairs support for the Directorate of Civil Engineers reports directly to the facilities division chief.

Installation Strategy and Plans / A4CP

Strategy and Future Concepts, A4CPS

A4CPS reviews the strategic environment affecting civil engineer (CE) and installation equities. A4CPS works with the CE enterprise to identify strategic responses to mitigate risks to the successful delivery of enduring CE capabilities.

The branch hosted a Strategy Summit in November 2017, which was attended by over 50 personnel from across the enterprise as well as partners from Air Force Manpower, Personnel and Services (AF/A1), Logistics, Engineering and Force Protection (AF/A4), Strategic Plans and Programs (AF/A5/8), and Communications and Information (A6). The summit targeted two goals: to identify interdependencies with other AF/A4 Capabilities and to review the current Civil Engineer Flight Plan to evolve the CE strategy. The Civil Engineer Flight Plan is now transitioning to an annex of A4's rebranded Air Force Basing and Logistics Flight Plan, with increased emphasis on evaluating achievement of prioritized objectives. The CE strategy focuses the CE enterprise on two fundamental capabilities: Agile, Innovative, Ready Airmen Engineers and Resilient, Right-Sized Installations. Those two capabilities are enduring and are supported by lines of effort, objectives and tasks.

A4CPS continued to support various Title X wargames to ensure basing and logistics realism is incorporated into operational planning. These wargames include Global Engagement 18, Long Duration Logistics Wargame 18, Global Mobility Agile Combat Support 18, Future Games 18 and Office of Secretary of Defense's (OSD) Persistent Hobgoblin series.

The branch has supported Air Force Strategic Plans and Requirements (AF/A5S) in the development of the Air Force's adaptive basing concept. Advanced the understanding of

the concept has been through participating in Air Combat Command's Combat Air Forces Weapons and Tactics Conference (WEPTAC), Air Force Installation and Mission Support Center's (AFIMSC) Installations WEPTAC and Air Mobility Command's Mobility Air Forces WEPTAC events. The team also collaborated with RAND, a nonprofit institution helping to improve policy and decision-making through research and analysis, on their research to explore A4's capacity and capability to support adaptive basing.

During AFIMSC's I-WEPTAC event, A4CP personnel led and co-led two mission area working groups. A4CPS continues to work with AFIMSC to identify alignment of recommendations with strategic objectives.

The team worked with AFIMSC, Air Force Civil Engineer Center (AFCEC), Air Force Operations, Plans and Requirements (AF/A3) and Studies, Analysis and Assessments (AF/A9) to support the FY21-FY50 strategic plan guidance A4 task to define air base resilience and to assess, quantify and prioritize air base resiliency initiatives, including air base defense requirements. A4CPS also developed a planning choice to improve airbase resiliency of forward bases in high threat environments in conjunction with the installation support panel.

Installation Planning and Resilience, A4CPI

The installation planning and resilience team stood up the Civil Engineer Information Technology (CE IT) Sub Table. The sub table's purpose is to provide a structured forum for collaboration and governance for CE enterprise-wide IT initiatives and challenges. Meeting monthly, the CE IT Sub Table oversees the IT strategy, writes the relevant IT policy and is the governance body for IT initiatives for the civil engineering community. The Sub Table met for the first time on May 2, 2018, and its charter was approved by the Integration Table on June 20, 2018.

NexGen IT TRIRIGA, an enterprise information technology system providing integrated asset management structure to the civil engineering community, has been rolled out to 43 installations as of April 23, 2018. The first installations of Wave 3 Phase 3, the 180-day transition from Automated Civil Engineer System to NexGen IT, will begin in early 2019. This transition will accommodate the enablement of the Office of the Secretary of Defense-mandated upgrade to Real Property Information Model (RPIM) 9.0. The RPIM 9.0 upgrade is scheduled to take place in fall 2018 in parallel with other major efforts (agile sprints/platform upgrade/plant replacement value re-baselining). In addition, an interface between Defense Enterprise Accounting and Management System and NexGen IT is in progress and 15 additional bases (total 16 installations) went live with the interface July 1, 2018. Over the course of 2017 and 2018, NexGen IT has undergone 21 releases and addressed 327 technical and functional requirements. The NexGen program continues to closely monitor the performance of the system and is currently working on deploying a comprehensive diagnostic suite to gain better insight on the performance of the application.

The 2005 Base Realignment and Closure Commission directed realignment of 26 installations to form 12 joint bases. Six of these joint bases are Air Force-led, four are led by the Navy and the remaining two are led by the Army. The primary policy directive established by the Deputy Secretary of Defense is the Joint Base Implementation Guidance. The Joint Base Implementation Guidance defined 44 different installation support functions delineated into over 200 Joint Base Common Output Level Standards (JB-COLS). The service common output level standards (COLS) and reporting tools allow joint base commanders to tier metrics, make more informed resource decisions and eliminate duplicative reporting efforts. In 2017, the Senior Joint Base Working Group made the decision to transition performance metrics and reporting at the joint bases from JB-COLS and the Cost Performance Visibility Framework tool to supporting component service COLS and reporting tools. The Air Force COLS will be utilized prior to March 2019 through a Memorandum of Agreement change (Annex W) for the six joint bases where the Air Force is the supporting component.

Air Force COLS currently consists of more than 40 functions and 250 metrics. The program addresses various installation support functions. Many of these functions are traditionally identified with the mission support group, but other functions include services provided by Wing Staff agencies. The Air Force COLS program will continue to evolve through installation, major command, AFIMSC and Headquarters Air Force inputs, as well as suggestions collected using the interactive features of the Air Force COLS playbook and through the Air Force COLS annual change process (ACP). This past ACP saw several changes in the metrics to further align performance/metrics to resourcing. Air Force COLS managers continue to try to obtain insight into the installation health assessment (IHA) to identify efficiencies. Lastly, the Air Force COLS Air Force Instruction (AFI) is currently in development and anticipated to be published by the end of 2018. The AFI will clearly identify roles and responsibilities for all stakeholders.

The installation planning and resilience team continued to provide policy and oversight on early planning and programming for various actions to include military construction/basing/National Environmental Policy Act timeline development, adversarial air proposals, Homeland Defense Radar-Hawaii with Missile Defense Agency, Tinian Divert Pipeline, Missile Defense Agency Long-Range Discrimination Radar at Clear Air Force Station, Alaska, F-35 bed-downs in Pacific, operational bed-downs for both Air National Guard and Air Force Reserve Command and Goodfellow Air Force Base, Texas, and unaccompanied children temporary housing. The team facilitated decision-making on numerous high-profile actions to include the Nevada Test and Training Range Land Withdrawal, the F-22 Operational Efficiency at Joint Base Elmendorf-Richardson, Alaska, the Presidential Aircraft Recapitalization Program and several classified programs.

In October 2017, an Air Force Guidance Memorandum (AFGM) was published for AFI 32-7062 Comprehensive Planning. The purpose of the AFGM was to address roles and responsibilities within the AFI to acknowledge the stand-up of the AFIMSC on April 6, 2015. As part of a broader initiative by Secretary of the Air Force Heather Wilson to reduce the volume and specificity of directive publications, A4CPI will be consolidating AFI 32-10142 Facilities Board, AFI 32-7062 Comprehensive Planning, AFI 32-7063 Air Installation Compatible Use Zone Program, AFI 32-7070 Air Force Noise

Program and AFI 32-7061 Environmental Impact Analysis Process into one installation planning AFI.

Integration Division / A4CI

A4CI is responsible for providing strategic enterprise analysis, enabling CE force development, supporting CE governance and managing A4C's contracts and staff budget.

Enterprise Analysis: The enterprise analysis team examines enterprise-wide information to provide strategic insights for senior leadership regarding budget and manpower. A4CI focused on analysis in support of resource advocacy, strategy and policy across the civil engineer (CE) enterprise in FY18. Once again, the year started with a series of continuing resolutions lasting until March 23, 2018. Once the FY18 appropriation was approved, the Air Force Operations and Maintenance (O&M) baseline enactment was approximately nine percent higher than in the previous fiscal year ($36.2 billion versus $39.5 billion). By the end of FY17, active CE O&M (appropriation 3400) obligated $5.7 billion, which included major programs such as facilities sustainment, restoration and modernization (FSRM), facility operations, environmental quality and environmental restoration. The FY18 President's Budget (PB) was approximately $3.3 billion. CE's largest program, FSRM, received an FY18 appropriation of $3.4 billion, excluding overseas contingency operations, which is an increase of 3.4 percent over the FY18 FSRM PB of $3.3 billion. For reference, the NDAA authorized $3.8 billion for the FY18 FSRM program. In FY17, only $2.5 billion was authorized, an increase of 49 percent from last year.

Force development: The A4C Force Development team continues to develop innovative digital solutions driving professional development across the CE enterprise. The team identifies field-centric needs and builds total force content to address those needs in the context of AF/A4 strategic priorities by coordinating directly with key stakeholders. By utilizing both Department of Defense (DoD) platforms and a robust social media strategy, the team has increased total reach of video content and other virtual offerings by 500 percent year after year, engaging over 107,000 Airmen and DoD personnel worldwide. In addition to views, the team's digital offerings have attracted over 7,000 shares on social media, raising the bar for Airmen engagement, not only for A4C, but also external organizations including Air Force Logistics (AF/A4L), Air Force Security Forces (AF/A4S), Air Education & Training Command and others.

In FY18, the team delivered over 34 virtual engagements to the field, highlighting essential topics such as: CE Airmen driving innovation at Spangdahlem Air Base, Germany ("Small Change, Big Impact"); the benefits of earning a master's degree from the Air Force Institute of Technology Graduate Engineering Management; A4 senior leaders fostering open dialogue on diversity throughout the Air Force ("Rooted in STEM, Powered by Diversity"); along with many others can be found on the team's DVIDS page.

CE governance: With the stand-up of the Air Force Installation and Mission Support Center (AFIMSC), strategy and policy at the Headquarters Air Force (HAF) were separated from resource allocation and execution. These new and separate lines of authority required a networked governance structure to ensure strategy remained aligned with execution across the CE enterprise. This requirement led to the transformed CE Enterprise Governance (CEEG) framework.

The A4CI's Governance team has become the primary facilitator of the governance forums where strategic decisions and high-level enterprise-wide coordination take place. More specifically, it provides support and oversight for governance bodies throughout the "Shared Tables" construct, including the Integration Table (I-Table), Senior Leader Shared Table (SLST), CE Board and Installation Executive Council (IEC). Eight Subordinate Tables (Sub-Tables) also exist at the action officer level to coordinate on policy issues and programs across AF/A4C, Secretary of the Air Force for Installations, Environment and Energy (SAF/IE), AFIMSC and AFCEC. The I-Table guides Sub-Table operations, provides additional adjudication, and elevates topics to the CE Board for determinations and the SLST for initiatives related to transformation and strategy. Lastly, the IEC provides Secretariat and Air Staff vision, priorities and vectors to the CE Enterprise and governs the overall AFIMSC enterprise. In the year since CEEG came into existence, A4CI oversaw 28 I-Tables, 13 CE Boards, two SLSTs, and two IECs.

In response to the SAF's Publication Reduction Initiative, A4CI also spearheaded a deliberate realignment of all 83 CE-specific Air Force Instructions (AFIs) and Air Force Manuals, reducing the number of CE publications by over 50 percent. Publication change managers, publication owners and A4CI reviewed all publications and strategically packaged them based on subject matter and correspondence to the six standard CE flights. A4C has also collaborated with stakeholders from HAF, AFIMSC and AFCEC to update the responsible, accountable, supportive, consulted and informed (RASCI) charts, which will help publication owners codify organizational roles and responsibilities during the AFI rewrite process. As a result, Airmen across all installations will have access to streamlined directive guidance more intuitive and can more easily inform their decision-making.

Readiness / A4CX

For over two decades, the Air Force's readiness focus has been fulfilling the steady state requirements to deploy and support installations and emergency services in southwest Asia. A4C civil engineers answered the call and met the demanding requirements to accomplish this mission. Due to the resulting high tempo of operations, the Air Force emphasized deployment predictability and cut back on combat-oriented inspections. The Air Force is to assist with restoring readiness in areas not emphasized for years.

During the past year, the expeditionary engineering team led a full review of all personal unit type codes (UTCs) to ensure compliance with the Chief of Staff of the Air Force's directive to implement deployed teams of three or more. The analysis resulted in the creation of two new UTCs, deletion of seven UTCs and modification or an approved waiver for 15 UTCs. Revised UTCs are to be sourced starting in FY20 and increase Air Force CE capabilities available to support combatant command requirements.

The emergency services team continues to make strides on all fronts, whether supporting chemical, biological, radiological and nuclear (CBRN) modernization, emergency management (EM), fire and emergency services (FES), or explosives ordnance disposal (EOD).

The CBRN modernization team successfully advocated for Air Force priorities in the Department of Defense Chemical and Biological Defense Program's planning, programming, budgeting and strategic planning activities. Additionally, the team laid the foundation for the annual Air Force CBRN defense prioritization process by hosting the CBRN Modernization Working Group Threat event. The team also hosts monthly CBRN Modernization Working Groups and Tiger Teams to inform stakeholders, establish a common baseline for understanding CBRN threats and risks to Air Force missions, and work to resolve some of the Air Force's most challenging issues, which have included joint expeditionary collective protection, next generation aircrew protective equipment, contamination mitigation and integrated early warning. This team provides analysis of these various systems and identifies near, mid and long-term potential solutions to modernize the Air Force and ensure we are ready to "win any fight, any time." Additionally, the modernization team developed a joint expeditionary collective protection concept of employment and concept of operations to maximize the ability to protect Air Force personnel in CBRN high-threat areas.

The Air Force Emergency Management Program's EM/CBRN policy team led efforts to increase chemical warfare defense equipment (CWDE) C Bag Asset basis of issue (BOI), and concurrently incorporated the updated BOI tables into Air Force Instruction (AFI) 10-2501, Air Force Emergency Management (EM) Program. This AFI update ensures all military, emergency essential civilians and contractors, and host nation personnel identified in host nation agreements supporting the Air Force in CBRN high-threat areas have the appropriate CWDE to accomplish their mission.

The Air Force EOD community implemented a new 7-level team leader course at Sheppard Air Force Base, Texas, on July 9, 2018. The new 14-day course is a task-oriented, go/no-go path EOD Airmen must pass before being certified on 7-level core tasks in the career field education and training plan. Students can expect to receive read-ahead materials approximately 30 days before their class start date. When they arrive, students receive one day of site orientation, training and equipment issue. The remaining training days consist of peacetime, full-mission profile response exercises where the students are required to lead a team in the successful completion of three emergency response events. The events include an aircraft response, an unexploded ordnance response and an improvised explosive device response. Students who do not successfully pass the course are required to repeat the training at a future date at the expense of the home unit.

The Air Force Exercise Science Unit (ESU) made significant headway in the EOD Tier 2 physical fitness tests and standards study. They continue to press forward in the multi-step effort to develop Tier 2 occupationally specific, operationally relevant physical fitness tests and standards for EOD. The ESU team is currently completing validation work on EOD-specific tests, part of the third significant step in the five-step Tier 2 process. The team began implementing the first prototype of the trial on July 5, 2018, at 11 predesignated locations identified by region. Representatives from all active, guard and reserve units participated in test implementation and data collection training for use in the final two steps of the study. Final prototype refinement will take place from November 2018 through December 2018, at which point the EOD community will begin the adaptation phase of the process.

The Emergency Services Branch also provides emergency management and EOD expertise in support of nuclear weapons accident/incident exercises (NUWAIX 18). NUWAIX 18, DIAMOND FALCON II is a multi-department full-scale exercise, which test how well emergency responders can safely mitigate a scenario involving potential damage to a U.S. nuclear weapon in Department of Defense custody. Efforts for interagency responses to mitigate possible radiological and non-radiological hazards are also involved with such scenarios. This year's exercise was held in Europe and featured the first successful employment of the innovative readiness training incident response force/and response task force as directed in the Nuclear Accident Response Plan (NARP). NUWAIX 18 included initial response, security, public messaging, protective actions, technical response and consequence management activities.

In February 2018, the Secretary of the Air Force established a cross-functional team from Headquarters Air Force and major command staffs to improve the state of Air Force readiness in line with priorities established under the new national defense strategy. Leadership challenged us with three simple readiness goals, "To be ready to win any fight, any time and survive and operate in any contingency operational environment."

The Readiness Questions

To better understand these goals let us break down the meaning of these fundamental goals.

Ready when? ***"NOW"*** We are called upon to transition from the just-in-time mindset to be "ready any time."

Ready for what? ***"Full-scale combat operation against a near-peer adversary"*** We need to ready ourselves for the increased magnitude and complexity of full-scale combat operations against forces matching size and capabilities.

Ready with what? ***"Combat organized, trained and equipped Airmen"*** We need airmen, squadrons and wings are organized, trained and equipped to enable them to survive and operate after attacks and execute combat operations in hostile environments.

A4CX is supporting these goals by updating civil engineer mission essential tasks lists to focus on contingency and installation sustainment operations and revitalizing the need to focus training on the ability to survive and operate.

AFIMSC

JB San Antonio-Lackland, Texas
ASK.AFIMSC@US.AF.MIL
Commercial: 210-395-1900
DSN: 969-1900

Maj Gen Bradley D. Spacy
Commander

Col Gregory J. Reese
Vice Commander

Lorna Estep
Executive Director

CMSgt Brion P. Blais
Command Chief Master Sergeant

MISSION
Deliver globally integrated combat support and shape the foundation of America's air, space and cyberspace power.

VISION
One team revolutionizing combat support … agile, innovative and networked … warfighters supporting warfighters!

The Air Force secretary (SECAF) and chief of staff (CSAF) established the concept of the Air Force Installation and Mission Support Center in February 2014 as part of the Future Air Force Initiative. The initiative was the result of a 2013 Secretary of Defense (SECDEF) decision to implement efficiency reforms, including reducing major headquarters across the Department of Defense (DoD) by 20 percent. In June 2014, Air Staff, major commands (MAJCOMs) and direct reporting units (DRUs) finalized the list of capabilities to be retained by those functions and the more than 150 installation and mission support (I&MS) capabilities that would transfer to AFIMSC. At the same time, efficiencies in manpower took place with the Air Force cutting some 3,400 positions — about 1,200 from I&MS — while providing 350 for AFIMSC headquarters.

The center stood up on April 6, 2015, as the single intermediate-level headquarters supporting Air Force I&MS activities. AFIMSC, a center under Air Force Materiel Command, achieved initial operational capability on Oct. 1, 2015, and full operational capability on Oct. 1, 2016, which confirmed the center's ability to execute the capabilities required of the organization in Program Action Directive 14-04.

Maj. Gen. Bradley Spacy commands this enterprise from the AFIMSC headquarters at Joint Base San Antonio (JBSA)-Lackland, Texas, consisting of 350 personnel spread among the special staff (personnel, chaplain, judge advocate, public affairs, inspector general, information protection and safety) and the directorates (expeditionary support, XZ; installation support, IZ; and resources, RM). The AFIMSC enterprise also consists of six primary subordinate units (PSUs): Air Force Security Forces Center (AFSFC), the Air Force Services Activity (AFSVA), Air Force Financial Management Center of Expertise (FMCoE), Air Force Financial Services Center (AFFSC), Air Force Civil Engineer Center (AFCEC) and the Air Force Installation Contracting Agency (AFICA).

In addition, 10 AFIMSC detachments are collocated with each MAJCOM and one DRU: Air Force Space Command (Detachment 1), Pacific Air Forces (Detachment 2), Air Force Special Operations Command (Detachment 3), U.S. Air Forces in Europe-Air Forces Africa (Detachment 4), Air Force District of Washington (Detachment 5), Air Force Materiel Command (Detachment 6), Air Education and Training Command (Detachment 7), Air Combat Command (Detachment 8), Air Mobility Command (Detachment 9) and Air Force Global Strike Command (Detachment 10).

The three-tiered organization — headquarters, PSUs and detachments — provides the Air Force an unprecedented, overarching enterprise perspective that is revolutionizing I&MS. Across the entire enterprise, AFIMSC gives the Air Force opportunities to leverage best practices, institute efficiencies and standardize support activities for 77 installations around the world.

CE RESPONSIBILITIES
AFCEC, an AFIMSC PSU, is responsible for providing responsive, flexible full-spectrum installation engineering services and stands as the focal point for military construction and the sustainment, restoration and modernization of Air Force installations worldwide. AFCEC works closely with the Air Force civil engineer, Air Staff, AFIMSC directorates and detachments to provide effective, efficient engineering support to all Air Force and assigned joint installations. See page 46 for more information on AFCEC.

AFIMSC directorates and core capabilities

Expeditionary Support Directorate, XZ

The AFIMSC Expeditionary Support Directorate fulfills its mission to train, equip and deliver agile combat support to warfighting commands … faster, smarter, better. The plans and analysis division provides planning and analysis, as well as combat support lessons learned for joint and Air Force installation and mission support leaders to assist in decision-making. The training and support division provides support for Air Force Air Expeditionary Forces deployed worldwide. The readiness division manages the operational requirements for more than 900 core unit type codes (UTCs).

Installation Support Directorate, IZ

The AFIMSC Installation Support Directorate consists of three divisions: installation engineering, protection services and operations support. Installation engineering works closely with AFCEC and AFIMSC detachments to provide installation commanders with effective engineering support. Protection services conducts physical infrastructure support and coordinates logistics operations activities at over 77 bases across the entire Air Force. This division also serves as the Air Force's lead integrator for the first responder community, including fire services, explosive ordnance disposal (EOD), emergency management and security forces. The operations support division facilitates logistics management, cyberspace systems support and information access capabilities in support of 77 installations.

Resources Directorate, RM

Three divisions constitute the AFIMSC Resources Directorate: financial management, operations research and contracting. Financial management provides multifunctional financial management, analysis and services exploiting global reach to support Air Force installations worldwide. Operations research develops mathematical models, performs data analytics, designs experiments, codes simulations, communicates uncertainty and develops data visualization in order to understand, optimize, assess, forecast, influence and inform AFIMSC decision-makers. Contracting works closely with AFICA personnel to provide the most efficient, centralized contracting support available to MAJCOMs and installations.

2018 statistics

Headquarters AFIMSC

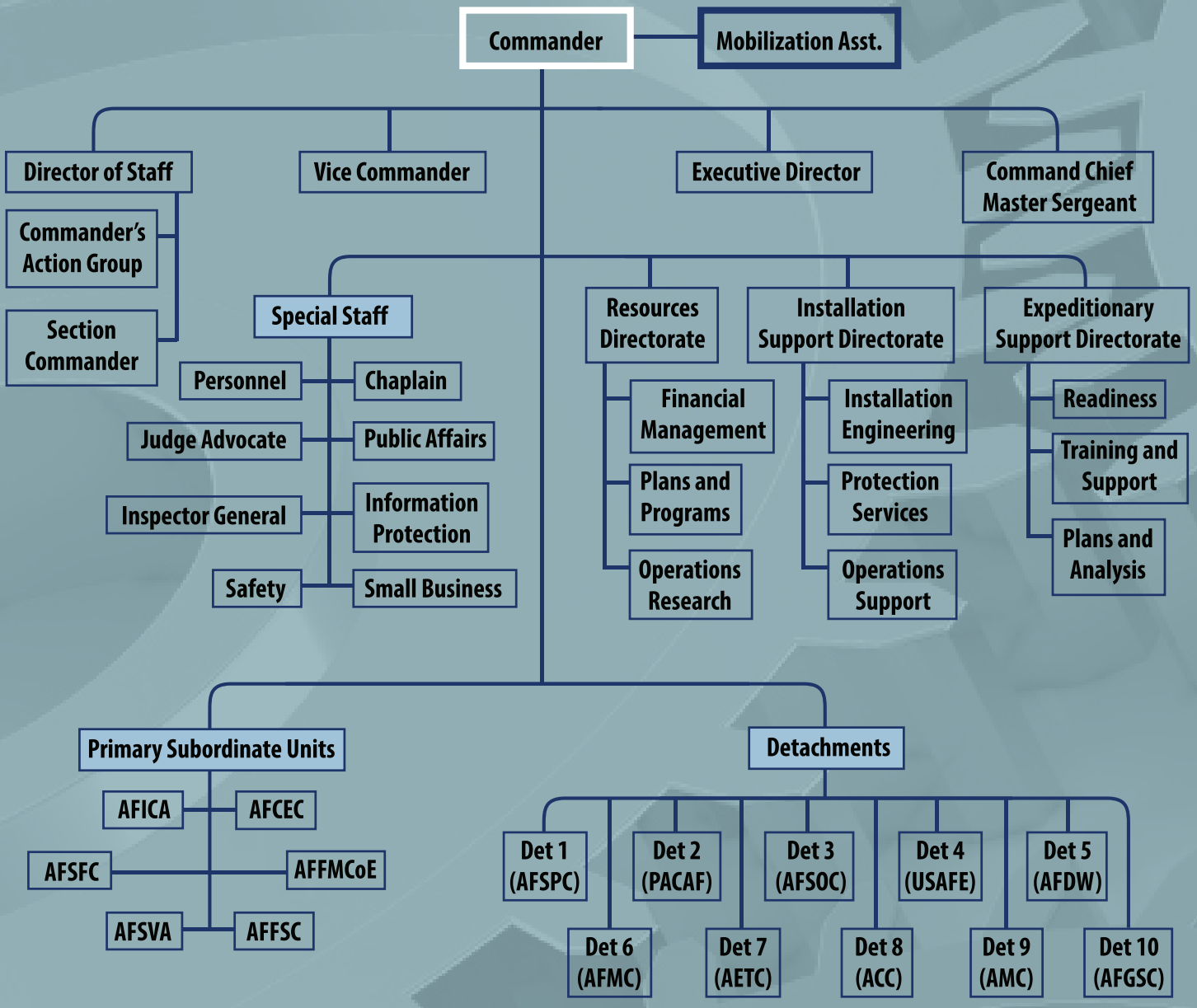
JBSA-Lackland, Texas

Primary Subordinate Units	
Air Force Security Forces Center	JBSA-Lackland, Texas
Air Force Installation Contracting Agency	JBSA-Lackland, Texas
Air Force Civil Engineer Center	JBSA-Lackland, Texas
Air Force Services Activity	JBSA-Lackland, Texas
Air Force Financial Services Center	Ellsworth AFB, South Dakota
Air Force Financial Management Center of Expertise	Denver, Colorado

Detachments	MAJCOM Supported	Location
Detachment 1	Air Force Space Command	Peterson AFB, Colorado
Detachment 2	Pacific Air Forces	JB Pearl Harbor-Hickam, Hawaii
Detachment 3	Air Force Special Operations Command	Hurlburt Field, Florida
Detachment 4	U.S. Air Forces in Europe	Ramstein Air Base, Germany
Detachment 5	Air Force District of Washington	JB Andrews, Maryland
Detachment 6	Air Force Materiel Command	Wright-Patterson AFB, Ohio
Detachment 7	Air Education and Training Command	JBSA-Randolph, Texas
Detachment 8	Air Combat Command	JB Langley-Eustis, Virginia
Detachment 9	Air Mobility Command	Scott AFB, Illinois
Detachment 10	Air Force Global Strike Command	Barksdale AFB, Louisiana

	Officers	Enlisted	Civilians	Total
HQ AFIMSC & Detachments	186	263	396	845
Air Force Civil Engineer Center	67	78	1,179	1,324
Air Force Financial Management Center of Expertise	3	4	23	30
Air Force Financial Services Center			115	115
Air Force Installation Contracting Agency	77	148	547	772
Air Force Security Forces Center	21	213	52	286
Air Force Services Activity	24	50	250	324
Grand Total	378	756	2,562	3,696

AFIMSC organization



Detachment 1

Location: Peterson AFB, Colorado
Commander: Col. Gregory T. Reich
Commercial: 719-554-7900 / DSN: 692-7900
Lead engineer: Charles Williams
Commercial: 719-554-5201 / DSN: 692-5201
AFIMSCDet1.DetAFSPC.Workflow.1@us.af.mil

Col Gregory T. Reich
Commander, Det 1

Charles Williams
Lead Engineer, Det 1

Personnel as of Sept. 30, 2018

Active Duty: 4 (+1 deployed)
Reserve: 3 (not in Det 1 total)
Guard: 0
Civilian: 12
Contractors: 2 (not in Det 1 total)

Annual accomplishments

- Installation Management (CE) supported 16 basing initiatives at continental U.S. locations. Most notably, Det 1 engineering staff continued to support the cyber mission forces bed-down of 10 squadrons and one group on four installations with a total of $41.8 million in facility projects, the National Space Defense Center bed-down on Schriever Air Force Base, Colorado, with $7.6 million in facility projects, which began 24/7 operations in 2018, and Mission Defense Agency's Homeland Defense Radar-Hawaii basing action which is proposed for one of three locations on Oahu, Hawaii.
- Installation Management (CE) successfully consolidated, centralized and standardized seven Air Force Space Command GeoBase webservers, serving geospatial data for 35 sites, onto the Air Force Civil Engineer Center's Geographic Information Office (GIO) Langley webserver. The webserver provides emergency response capability, hurricane tracking, installation map, floor plan, environmental, building, road and utility information services. Additionally, three servers — one virtual and two physical — were brought online and are now administrated by the AFCEC Langley GIO team.
- Installation Management (CE) also continued to provide engineering support for the Joint Space Operations Center (JSpOC) consolidation located at Vandenberg Air Force Base, California, a $151 million total initiative with two phases. The Phase I range consolidation was previously completed and is fully operational. Phase II, the renovation of Building 7000, was 87 percent construction complete as of June 2018. Of significance in 2018 was the award of the supporting Generator Unspecified Minor Military Construction project, valued at $2.6 million, and the transition of JSpOC to the Combined Space Operations Center as it became inclusive of several ally nations.
- Emergency Management (EM) worked with Air Force Space Command/Inspector General and Air Force Intelligence, Surveillance and Reconnaissance (A2), Operations, Plans and Requirements (A3) and Communications and Information (A6) directorates advancing specific ability to survive and operate guidance supporting seven AFSPC installations, two launch ranges and nine geographically separated units providing space and cyberspace capabilities around the world. Additionally, EM developed and provided AFCEC Emergency Management an innovative continuous evaluation tool enabling cross data assessment providing better visibility on EM flights and Wing programs. The approach also enables higher headquarters trend analysis to determine if operational test and evaluation revisions are required across the Air Force enterprise.
- Fire Emergency Services (FES) assisted the 30th Space Wing at Vandenberg Air Force Base, California in rebuilding their "Hot Shot" firefighting program protecting critical space launch missions from wildland fire threats. FES partnered with AFSPC A1 and A4 for an AFSPC/vice commander (CV) waiver to fill 14 over-hire positions and coordinated Dire Hire Authority with A1/Air Force Personal Center (AFPC) expediting hiring actions. FES also coordinated with AFSPC Surgeon General, Air Force Health Insurance Portability Accountability Act (HIPAA) Office and Air Force Medical Operations Agency clarifying first responder reporting requirements to prevent improper release of patient data.

Detachment 2

Col William E. Brooks
Commander, Det 2

John R. Lohr
Lead Engineer, Det 2

Location: Joint Base Pearl Harbor-Hickam, Hawaii
Commander: Col. William E. Brooks
Commercial: (808) 449-3810 / DSN: (315) 449-3810
Lead engineer: John R. Lohr
Commercial: (808) 449-2864 / DSN: (315) 449-2864
AFIMSCDet2.DETPACAF.WORKFLOW@us.af.mil

Personnel as of Sept. 30, 2018

Active Duty: 20
Civilian: 29
Contractor: 8
Reserve: 2

REPRESENTATIVE ACCOMPLISHMENTS

- Provided planning, programming and engineering expertise to multiple site activation task forces and site surveys in support of the Asian Pacific Stability Initiative. Efforts include military construction (MILCON)-level requirements development and area development plans. Led planning charrettes supporting over $1.2 billion in facility projects at seven locations throughout the Indo-Pacific Region, to include Australia and the Commonwealth of the Northern Marianas Islands.
- Assisted Pacific Air Forces (PACAF) with developing the requirements through detailed planning charrettes for over $117 million in airfield damage repair (ADR) warehouses at multiple main operating bases. Critical to protecting ADR equipment and materials in harsh corrosive environments.
- Choreographed the largest Defense Logistics Agency MILCON program to modernize the fuel infrastructure throughout the Pacific region with a total of 15 projects valued at $274 million.
- Divested 366 surplus military family housing (MFH) units: 86 units at Okinawa, 140 units converted to unaccompanied housing and 140 units converted to unaccompanied transient contingency quarters at Yokota Air Base, Japan. Actions support changing mission requirements at both locations.
- Garnered over 97 percent of the Air Force's Real Property Maintenance Contract budget to execute 26 MFH projects valued at $66.5 million.
- Orchestrated and prioritized PACAF's dorm master plan (DMP), encompassing 12 installations and sites. Resulted in timely completion of DMP's phase one study for all 12 installations — a first in over five years.

Detachment 3

Col Aeneas Gooding
Commander, Det 3

Lt Col Kevin Brown
Lead Engineer, Det 3

Location: Hurlburt Field, Florida
Commander: Col. Aeneas Gooding
Commercial: 850-884-3040 / DSN: 579-3040
Lead Engineer: Lt. Col. Kevin Brown
Commercial: 850-884-4974 / DSN 579-4974
AFIMSCDet3.AFSOC.Workflow.1@us.af.mil

Personnel as of Sept. 30, 2018

Active duty: 4
Civilian: 8

ANNUAL ACCOMPLISHMENTS

- Provided engineering, planning and programming expertise to multiple site activation tasks, including the 352nd Special Operations Wing move to Spangdahlem Air Base, Germany, as part of the European Infrastructure Consolidation program and CV-22 moves to Yokota Air Base, Japan, in support of Air Force Special Operations Command's (AFSOC) worldwide special operations forces commitments.
- Developed an electronic toolkit to supplement Air Force Manual 32-1084 to quickly identify permanent programmatic AFSOC facility requirements and costs for any location based on the unit type code construct of personnel, equipment, and airframes.
- Provided community planning expertise to develop area development plans for Cannon Air Force Base, New Mexico, northwest flight line and munitions storage area and Hurlburt Field, Florida, flight line.
- Provided chemical, biological, radiological and nuclear incident oversight and execution of $2.0 million in support of AFSOC's unique transportable collective protection and decontamination missions.

Detachment 4

Location: Ramstein Air Base, Germany
Commander: Col. Travis Harsha
Commercial: 496-3714-76331 / DSN: 314-480-6331
Lead Engineer: Lt. Col. David Sulhoff
Commercial 496-3714-73063 / DSN: 314-480-3063

Personnel as of Sept. 30, 2018
Active duty: 35
Civilian: 37

Annual Accomplishments
- Provided engineering, planning and programming expertise to multiple site activation task forces in support of European infrastructure consolidation and F-35 bed-down program. Guided development and execution of military construction and facilities sustainment, restoration and modernization programs to support initiative to realign several U.S. Air Forces in Europe (USAFE) missions to reduce excess infrastructure and effectively posture forces within theater.
- Delivered airfield planning expertise in support of the U.S. European Reassurance Initiative. Applied North Atlantic Treaty Organization and host-nation design criteria into basing and bed-down plans. Efforts support U.S. European Command's desire to provide persistent air presence within the region as a show of support for our allies and drove rewrite to U.S. Air Force in Europe Instruction incorporating unique theater requirements for future planning efforts.
- Provided sole entomology subject matter expertise for theater. Collaborated with major command operators, maintainers and civil engineers to ensure compliance with host-nation requirements across nine countries and developed USAFE's first aircraft disinfection standard operating procedure to combat infectious diseases.
- Worked with Incirlik Air Base, Turkey, to convert 671 military family housing units to contingency and unaccompanied housing to support installation following departure of families from installation. Also successfully divested 456 military family housing units at Lajes Field, Portugal, to government of Portugal in support of Lajes streamlining initiatives.

Col Travis Harsha
Commander, Det 4

Lt Col Davis Sulhoff
Lead Engineer, Det 4

Detachment 5

Location: Joint Base Andrews, Maryland
Commander: Col. Joel L. Briske
DSN: 240-612-1911
Lead Engineer: Andrei Froicu
DSN: 240-612-1942
AFIMSCDet5.AFIMSC.Workflow@us.af.mil

Personnel as of June 30, 2018
Active duty: 3
Civilian: 4

ANNUAL ACCOMPLISHMENTS
- Orchestrated future recapitalization of Joint Base Andrews's critical airfield infrastructure.
- Key stakeholder for the $312 million military construction (MILCON) planning and programming effort to support bed-down of the Presidential Aircraft Recapitalization program.
- Ongoing support to enable project execution and award of four phase/four-year plan to recapitalize Taxiway Whiskey, a $129 million investment.
- Provided Air Force Civil Engineer Center (AFCEC) onsite support for design efforts of a $50 million MILCON Consolidated Communications Center construction project to facilitate future critical communication functions for the Air Force, the Defense Information System Agency, senior leaders command, control and communications systems and the White House.
- Partnered with AFCEC and the Air Force District of Washington and developed "Sikes Act" $12 million cooperative agreement between the Air Force and Green Trust to establish the first Air Force Wetlands Mitigation Bank in support to Joint Base Andrews.
- Safeguarded a $13 million, 21-point firing range MILCON project, securing future training facility for Department of Defense and interagency personnel across the National Capital Region.
- Advised and assisted in all additional planning and requirements of the 11th Wing in support of a $54 million program. Teamed with Air Force Financial Management Center of Expertise to steer the economic analysis effort and determine the most systematic solution to design a new $13 million MILCON child development center construction project to meet mission requirement in terms of comparative costs and benefits.

Col Joel L. Briske
Commander, Det 5

Andrei Froicu
Lead Engineer, Det 5

Detachment 6

Location: Wright-Patterson AFB, Ohio
Commander: Col. Yvonne S. Spencer
Commercial: 937-257-3732 / DSN: 787-3732
Lead engineer: Randall Parker
Commercial: 937-904-2264 / DSN: 674-2264
AFIMSCDet6.CCA.CommandSection@us.af.mil

Col Yvonne S. Spencer
Commander, Det 6

Randall Parker
Lead Engineer, Det 6

Personnel as of Sept. 30, 2018
Active duty: 9
Reserve: 3
Guard: 0
Civilian: 24
Contractor: 1

ANNUAL ACCOMPLISHMENTS

- Authored the Air Force Material Command (AFMC) Energy Assurance Campaign Plan (EACP) which reframes the dialogue about energy from a conservation-centric focus to elevate the discussion and concerted efforts on the full spectrum of energy as a critical mission resource. The EACP adopts the three Air Force goals of improved resiliency, optimized demand and assured supply and integrates them into four lines of effort: optimized systems and processes, cyber secure control systems, independent alternate energy sources and reliable and managed distribution. The EACP was lauded by Secretary of the Air Force installations, environment and energy as "first of its kind" and shows AFMC's intent to lead the way for the Air Force in the area of energy assurance.
- Coordinated and supported AFMC execution of 233 facility sustainment, restoration, modernization and demolition facility projects and a $365 million infrastructure investment in fiscal 2018.
- Tracked clearance of 90,909 bombing range acres in support of range/area clearances and disposals of unserviceable munitions. Over 23,250 man-hours were expended and 119,026 ordnance items destroyed, including 40 large missile motors in support of the START II treaty. Provided oversight and reporting for 12,161 man-hours in support of 396 research and development and weapons verification missions. Managed 364,000 explosive ordnance disposal munitions assets valued at $1.7 million, supporting home station mission/training and contingency operations.
- Planned and conducted two ability to survive and operate (ATSO) focus events in support of AFMC installations and Exercise Agile Warrior. Developed tactics, techniques and procedures and standard operating procedures for standardizing and implanting chemical, biological, radiological and nuclear defense (CBRN) and ATSO training, which is attended by major command personnel and key to reinvigorating atrophied skill sets. Evaluated three base inspections and developed a 72-item checklist for core CBRN and ATSO processes and identified 70 findings. Analyzed the findings and identified trends and corrective actions were adopted by the AFMC commander and incorporated into the Chief of Staff of the Air Force report.
- Managed $16 million in enterprise-wide contracts supporting GeoBase programs on 70 installations across AFMC, Air Combat Command, Air Force Special Operations Command, Air Education and Training Command, Air Force Space Command, Air Forces Central Command and Air Forces Southern. Conducted technical review and coordination on over 30 National Environmental Policy Act documents affecting critical Air Force testing and sustainment missions. Supported the Air Force warfighting integration capability and F-35 Hybrid Product Support Integrator basing and bed-down actions and provided crucial manpower to the AFMC Installation Access Control Point High Performance Team assessments.

Detachment 7

Location: Joint Base San Antonio, Texas
Commander: Col. Eric S. Turner
Commercial: 210-652-9418 / DSN: 487-9418
Lead Engineer: Danielle D. Poyant
Commercial: 210-652-1778 / DSN: 487-1778
AFIMSCDet7.Workflow.AETC@us.af.mil

Personnel as of June 1, 2018
Active duty: 14
Reserve: 3
Guard: 0
Civilian: 13
Contractor: 0

Col Eric S. Turner
Commander, Det 7

Danielle D. Poyant
Lead Engineer, Det 7

ANNUAL ACCOMPLISHMENTS

- Facilitated $684 million in fiscal 2018 installation management and support-funded programs for Air Education and Training Command (AETC), currently the largest funded major command. Championed active construction execution programs for AETC installations, aligning to both Air Force Installation and Mission Support Command (AFIMSC) and AETC goals, which included 167 projects valued at $278.9 million in facilities sustainment, restoration and modernization and 50 projects valued at $959 million in military construction (MILCON). Supported the preparations to transfer Holloman Air Force Base, New Mexico, from Air Combat Command to AETC in FY19 to include assisting the Secretary of the Air Force International Affairs in negotiating with the German government to acquire their vacant facilities.
- Supported advancing AETC's capacity to train Airmen by advocating for and facilitating $640 million in basic military training recapitalization and $51 military in repairs to student training and housing facilities, including combat medical training dormitories at Joint Base San Antonio (JBSA).
- Supported relocation of F-16 formal training unit from Luke AFB, Arizona, to Holloman AFB, New Mexico. Led development, advocacy and execution of $14 million in facility renovations to bed-down 45 F-16s and enable the stand-up of a new Block 40 FTU flying unit to complement the two F-16 FTU fighter squadrons previously moved to Holloman AFB. Provided civil engineer (CE) program management for other strategic basing efforts including various FTUs (F-35A, F-16, KC-46A, MQ-9, and Combat Rescue Helicopter) and T-X basing plans in actions totaling over $810 million in new infrastructure.
- Provided infrastructure guidance and facilitated repairs and enhancements of Battlefield Airmen (BA) campus facilities and stand up of BA Training Wing at JBSA. Supported the Chief of Staff of the Air Force special interest item to develop an over $200 million BA Campus Plan. Secured MILCON funding for new $66 million aquatic center.
- Coordinated, assisted and provided oversight for AETC explosive ordnance disposal (EOD) teams conducted 259 EOD operational missions, including 67,610 man-hours clearing 20,409 ordnance items from ranges supporting pilot initial/upgrade training. EOD program manager piloted Headquarters Air Force BA recruiting squadron initiative, partnered with AETC and Air Force Recruiting Service to familiarize 90 BA recruiters with EOD mission, and identified 12 EOD development special duty candidates for recruiting duty. Identified critical EOD preliminary school leadership gap and funded new senior master sergeant position, driving school attrition to historical low of 8 percent.
- Command emergency managers authored AETC's evaluation guide and checklist to utilize survive and operate chemical, biological, radiological and nuclear defense skills setting the standard for the Air Force's enterprise-wide return to total force readiness. Envisioned and led an innovative AETC initiative to procure $800,000 in lightweight inflatable decontamination system equipment and training boosted 11 bases' CBRN posture by 25 percent. Managed AETC emergency services' response for Hurricane Harvey and aftermath; protected more than 80,000 JBSA personnel, 1,300 facilities, and $10.1 billion in resources, while supporting the Federal Emergency Management Agency and state emergency response to the Texas gulf coast.

Detachment 8

Col Erik K. Rundquist
Commander, Det 8

John G. Sabochick
Lead Engineer, Det 8

Location: Joint Base Langley-Eustis, Virginia
Commander: Col. Erik K. Rundquist
Commercial: 757-764-2003 / DSN: 574-2003
Lead Engineer: John G. Sabochick
SABOCHICK #???757-764-6193 / DSN: 574-6193
AFIMSCDet8.Workflow.ACC@us.af.mil

Personnel as of June 30, 2018
Active duty: 17
Reserve: 1
Guard: 0
Civilian: 24
Contractors: 0

ANNUAL ACCOMPLISHMENTS

- Provided facility and logistics basing and bed-down support to Air Combat Command (ACC), tracking 95 projects valued at $600 million for F-35, RC-135 EIC, RQ-4, common mission control center, MQ-1/9 formal training unit, 363rd Intelligence, Surveillance and Reconnaissance Wing, Combat Rescue Helicopter, remote-piloted aircraft culture process improvement program and the Close Air Support Integration Group.
- Analyzed electrical alternatives with the Air Force Office of Energy Assurance for infrastructure requirements to meet current and future mission needs at Beale Air Force Base, California. Solution set supports critical intelligence, surveillance and reconnaissance mission requirements and ongoing contingency and critical mission operations requiring reliable electrical power in fiscal 2020 and beyond.
- Led the emergency management community in development of a command and control course for leaders for chemical, biological, radiological and nuclear defense environments, focusing on the ability to survive and operate. Delivered the course to two installations and provided enterprise assistance in the return to full spectrum readiness.
- Supported 15 installation airfield waiver programs and base community planners with the review and validation of 181 active waivers. Staffed 18 ACC airfield waiver packages for coordination and approval. Evaluated criteria for ramp shoulders at Grand Forks Air Force Base, North Dakota, and confirmed they were not required, saving $22.4 million.
- Advanced the rescue task force (RTF) concept by crafting template emergency plans, equipment solutions and operating guides, and providing them to installations. The RTF is the multi-functional teaming of security forces personnel with emergency medical technician-trained firefighters or emergency medical services personnel to deliver emergency casualty care and reduce the time to treat victims of active shooter or improvised explosive device incidents.
- Led combat support wing planning effort, developing three multi-functional exercises to test simultaneous re-arm/re-fuel operations of fifth generation fighter aircraft.

Detachment 9

Col James K. Kossler
Commander, Det 9

Martin P. Buncher
Lead Engineer, Det 9

Location: Scott Air Force Base, Illinois
Commander: Col. James K. Kossler
Commercial: 618-229-0738 / DSN: 779-0738
Lead Engineer: Martin Buncher
Commercial: 618-229-0969 / DSN 779-0969
AFIMSC.DETAMC.WORKFLOW@us.af.mil

Personnel as of Sept. 30, 2017
Active duty: 13
Reserve: 2
Civilian: 15

ANNUAL ACCOMPLISHMENTS

- Led $225 million facilities sustainment, restoration and modernization investments for air mobility command (AMC) bases. Balanced efforts across 12 units and stakeholders — 101 projects in strategic capability categories ranging from installation engineering to quality living environment.
- Planned, programmed and synchronized military construction (MILCON) for AMC's acquisition-related new mission bed-down programs, completing 16 KC-46A projects valued at $232 million at McConnell Air Force Base, Kansas. Drove site activation task forces main operating base 4/4A, identifying 11 projects valued at $146.5 million for Joint Base McGuire-Dix-Lakehurst, New Jersey, and 10 projects valued at $164.3 million at Travis AFB, California. Teamed with multiple agencies managing the MILCON projects, environmental impact statement and wetland bank mitiga-

tion in support of the Presidential Aircraft Recapitalization Program to keep the $312 million program on track.
- Managed and executed the civil engineer transportation working capital fund (TWCF) portfolio, developing the fiscal 2017-2018 straddle list. The list included 24 requirements totaling $37 million, directly supporting AMC's strategic airlift mission. Teamed with AMC/A4OC to prioritize 105 projects, totaling $163 million for FY19-20 TWCF integrated priority list, including 9.2 million square feet of facilities and 7.1 million square yards of pavement at 24 locations worldwide. Performed feasibility studies en route at Andersen AFB, Guam, Joint Base Pearl Harbor Hickam, Hawaii and Kunsan Air Base, South Korea, to determine solutions to specific facility requirements at these bases.
- Supported AMC and the 375th Air Mobility Wing in developing a higher headquarters (HHQ) area development plan and courses of action for phasing and personnel moves associated with the $140 million AMC headquarters facilities repair projects. The efforts incorporate the HHQ stakeholder requirements, provide direction for future growth of the HHQ area, ensure execution of multiple facilities projects to meet AMC and United States Transportation Command's 24/7 mission requirements, and enable buy-in and approval from the Secretary of the Air Force and Congress.
- Selected $86 million Air Force Civil Engineer Center award of Air Force fire and emergency services (FES) personal protective equipment contract, providing safety and standardization across FES community and saving approximately $11 million.
- Provided operational test and evaluation emergency management of chemical, biological, radiological and nuclear defense support to 120,000 AMC and 32,000 Air Force District of Washington members, posturing Mobility Air Force and District of Washington for mission continuity. Completed Civil Reserve Air Fleet chemical warfare defense equipment maintenance and sustainment at Dover AFB, Delaware, for 2,800 aircrew and provided procedural guidance and team development for large-frame aircraft decontamination with the Joint Biological Aircraft Decontamination System.
- Comprehensively inventoried Air Force explosive ordnance disposal (EOD) mobility vehicles and determined EOD enterprise has $1.9 million in unauthorized vehicles and a shortage of 51 up-armored high mobility multipurpose wheeled vehicles and 43 high mobility trailers. Utilized data to analyze the unit type-code availability library and developed recommended fixes for units across the enterprise.

Detachment 10

Location: Barksdale AFB, Louisiana
Commander: Col. D. Wade Lawrence
Commercial: 318-456-4293 / DSN: 781-4293
Lead Engineer: Dan Aldrich
Comm: 318-456-5051 DSN: 781-5051
AFIMSC.DETAFGSC.WORKFLOW@us.af.mil

Personnel as of June 30, 2018
Active Duty: 15
Reserve: 1
Civilian: 7
Contractor: 5

Col D. Wade Lawrence
Commander, Det 10

Robert Aldrich
Lead Engineer, Det 10

ANNUAL ACCOMPLISHMENTS
- Guided infrastructure plans for new B-21 bomber and delivered courses of action, valued at over $500 million, for Secretary of the Air Force and Chief of Staff of the Air Force decisions.
- Led intercontinental ballistic missile (ICBM) facilities recapitalization efforts, bed-down of ground-based strategic deterrent ICBM replacement and new helicopter, totaling over $80 billion to rebuild nuclear deterrence.
- Served as security vanguard, led aggressive antiterrorism and force protection program. Team visited eight bases and assessed and mitigated threats to protect bomber and nuclear forces.
- Spearheaded bed-down of Global-Aircrew Strategic Network Terminal at more than 40 bases to keep critical new Nuclear C3 system on track.
- Delivered expert fire, explosive ordnance disposal and emergency management support to eight Air Force Global Strike Command bases and solved several manning and resource issues.
- Helped lead effort to reenergize broader high-altitude electromagnetic pulse program.
- Selected as Air Force Installation and Mission Support Center's team of the year for 2017.

ACC

JB Langley-Eustis, Virginia
udg_acc.a4c_ce@us.af.mil
Commercial: 757-764-3002
DSN: 574-3002

Col. Dee Jay Katzer
Lead Engineer

COMMAND MISSION

"Dominant Combat Airpower for America." Air Combat Command organizes, trains and equips combat-ready Airmen to control and exploit the Air on behalf of the Joint Force.

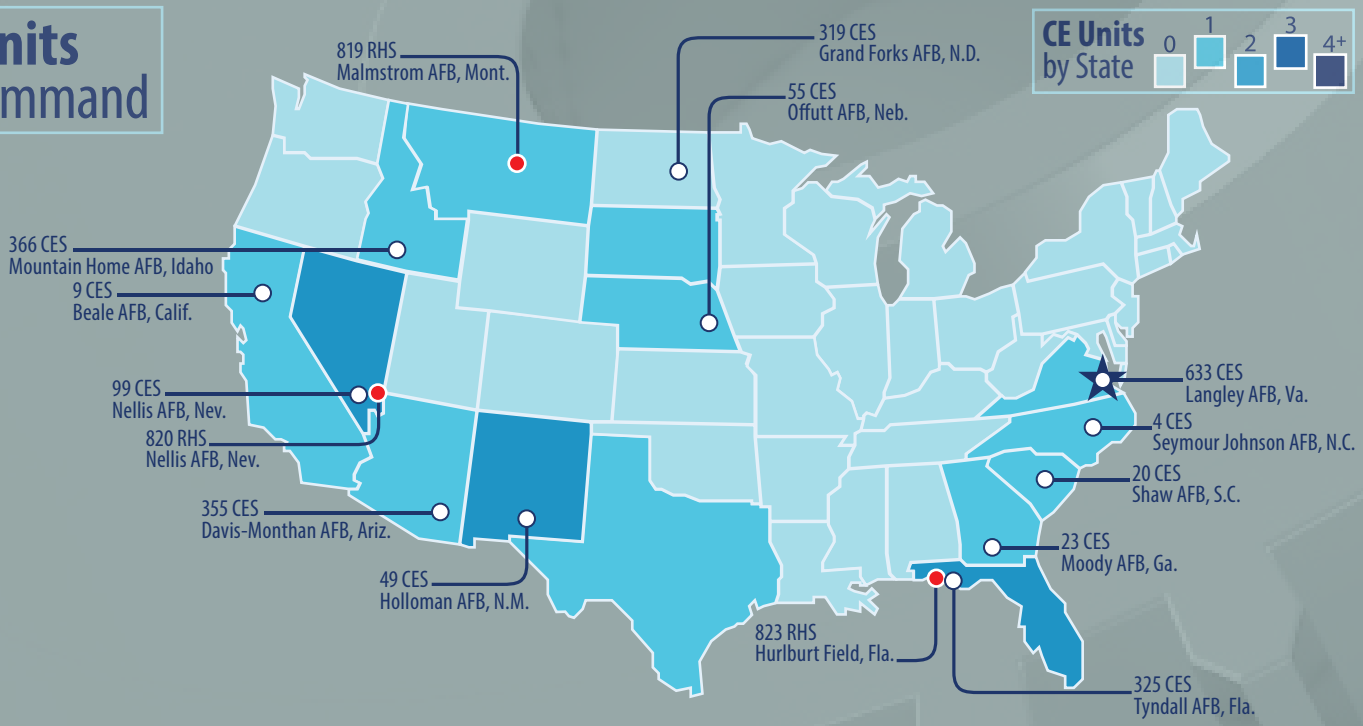
CE RESPONSIBILITIES

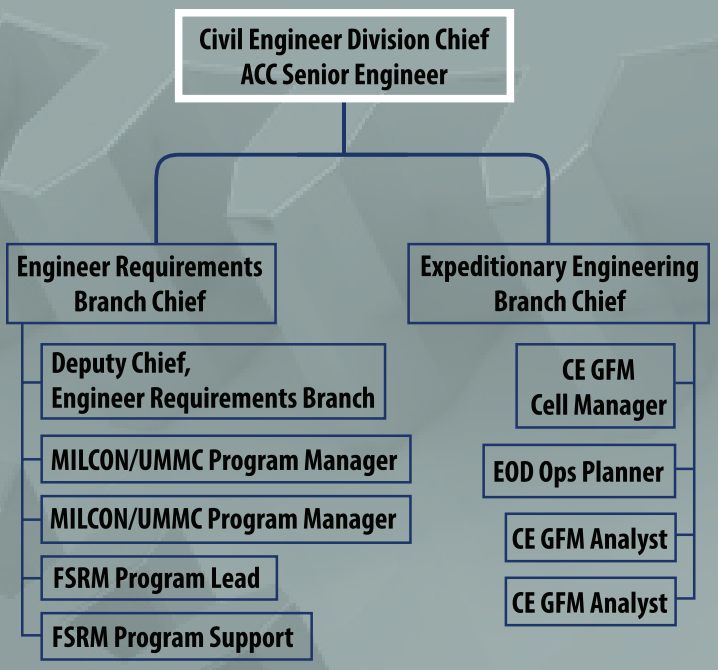
ACC/A4C provides global force management for Air Force civil engineers, developing and deploying mission-ready, motivated, trained and resilient Rapid Engineer Deployable Heavy Operational Repair Squadron Engineer (RED HORSE), Prime BEEF, explosive ordnance disposal (EOD), fire and emergency managers. ACC/A4C also provides deliberate and adaptive planning, validation, prioritization and advocacy for military construction (MILCON) and operations and maintenance requirements. It develops policy and implementation strategies across the command.

REPRESENTATIVE ACCOMPLISHMENTS

- Managed CE deployments in support of ACC's role as the Air Force provider of conventional forces. Deployed nearly 5,000 engineers across five combatant commands.
- Served as lead command for an $800 million fleet of 255 explosive ordnance disposal and RED HORSE mine-resistant ambush protected vehicles. Worked closely with Warner Robbins Air Force Base, Georgia, Life Cycle Management Center and the Air Combat Command Directorate of Logistics, Engineering and Force Protection's Weapon Systems Team to meet Pacific Air Force Command's urgent request to accelerate fielding of 30 critical life-saving assets.
- Developed fiscal 2020-2024 MILCON investment approach across 18 locations. Advocated for 89 projects at $2.24 billion to meet the ACC commander's top priorities.
- Built FY19-21 facilities investment strategy. Validated 509 projects at $1.3 billion and developed strategy for advocating the command's most critical requirements. Secured FY19 funding for 160 projects at $259 million for ACC wings.
- Coordinated $43 million for F-35, Global Hawk, MQ-9 and HH-60 facility operation and maintenance bed-down requirements at 16 bases.
- Validated and secured funding for $6.8 million for five bases in search of emergent facility and infrastructure requirements.
- RED HORSE personnel deployed across multiple areas of responsibility completing and beginning several construction projects such as a C-17, remote piloted aircraft and intelligence surveillance and reconnaissance aircraft-capable runway — to include life support, operations, maintenance, petroleum, oil and lubricants and aerial port areas. They also constructed three clinics, three schools, a community center facility, a post-natal women's clinic, airfield projects, life support areas and a tent city buildup for a 1,500-person Security Forces Assistance Brigade bed-down."

CE Units in Command





2018 statistics

Major bases	12
Plant Replacement Value:	$31B
Buildings:	68.8M sq. ft.
Airfield Pavement:	41.1M sq. yd.
Housing:	11,259 units
Dorms:	8,700 rooms

ACC personnel:

Active duty and civilian:	82,404
Reserve and Guard:	54,457

CE Personnel

Active duty:	3,930
Reserve:	555
Guard:	4,218
Civilian	1,535

MILCON	24 projects/$612.9M
SRM	160 projects/$259M
Facilities Operations	$159.4M in O&M funding

AETC

JB San Antonio-Randolph, Texas
UDG_AETC_A4C@us.af.mil)
Commercial: 210-652-3921
DSN: 487-3921

Maj Jeremy A. Lock
Chief, Engineer Services

COMMAND MISSION

Recruit, train and educate Airmen to deliver airpower for America

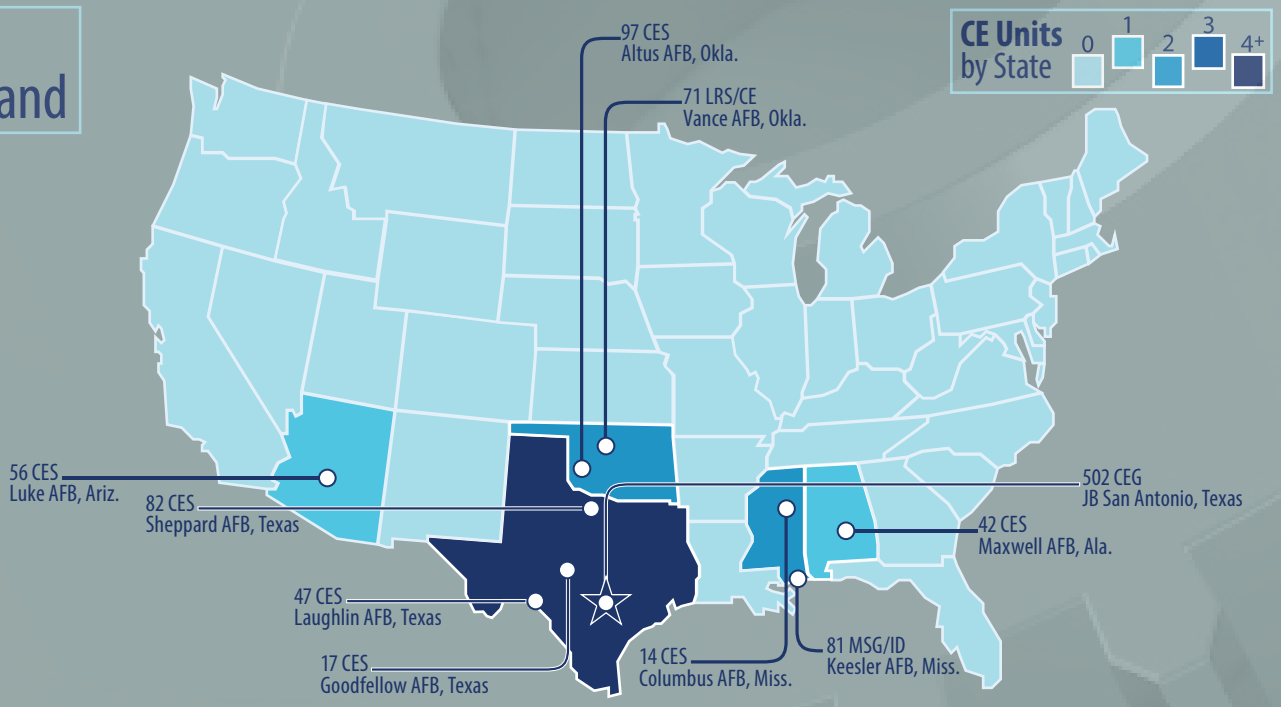
CE RESPONSIBILITIES

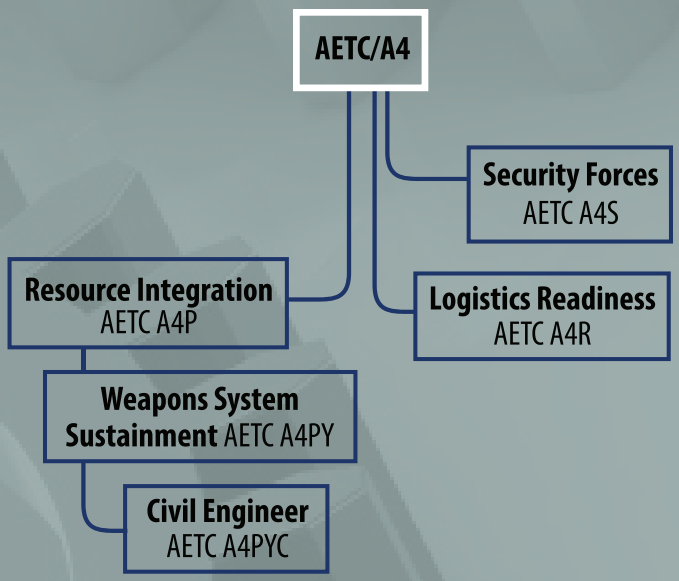
Air Education and Training Command (AETC) civil engineering validates, prioritizes and advocates for military construction (MILCON), unspecified minor military construction (UMMC) and facilities, sustainment, restoration and modernization (FSRM) requirements to integrate direct mission-related requirement priorities.

REPRESENTATIVE ACCOMPLISHMENTS

- Led AETC facilities investment strategy. Led multi-function team from across the command to review and prioritize over 200 projects valued at over $1.2 billion across the MILCON, UMMC and FSRM programs.
- Supported Air Force initiative to reach 350,000 end strength by 2025 through facility construction and enhancements. Advocated for, and received, Air Force support to complete basic military training campus plan and medical education and training center dorm rehabilitation plan.
- Supported 20 percent growth in pilot production capacity spanning the full range of airframes. Supported F-35, KC-46, F-16, MQ-9, UH-1N and T-X bed-down efforts across six installations through site surveys and facility advocacy.
- Key contributor in addressing critical Battlefield Airman manning shortages. Supported multiple facility investments, an overarching bed-down strategy, the standup of a new Battlefield Airmen preparatory course and the creation of a wing and command directorate.

CE Units in Command





2018 statistics

Major bases	10
Plant replacement value	$24.2B
Buildings	70M sq. ft.
Airfield pavement	15.6M sq. yd.
Housing	4,777 units
Dorms	69,350 rooms

AETC personnel

Active duty	29,275
Reserve	2,149
Guard	4,446
Civilian	14,415
Contractor	9,435

CE personnel

Active duty	609
Reserve	27
Civilian	2,107
Contractor	1,993

MILCON	11 projects/$125M
SRM	159 projects/$272M
Facilities operations	$192M

Facing page: The 364th Training Squadron, Detachment 1 at Fort Leonard Wood, Missouri, provides technical training for engineering assistants and pavements and equipment operators. Airman Basic Bailey Barnes and Airman 1st Class Frederick Dowdy are working to obtain desired elevations while Airman Justin Glidden operates a dozer. (Air Force photo by Staff Sgt. Aaron Seigler)

AFGSC

Barksdale AFB, Louisiana
AFGSCA4CWORKFLOW@US.AF.MIL
Commercial: 318-456-4134
DSN: 718-4134

Brian C. Lee, PE
Chief, Engineering Division

COMMAND MISSION

AFGSC provides strategic deterrence, global strike and combat support…anytime, anywhere. AFGSC is responsible for the nation's three intercontinental ballistic missile wings, the Air Force's entire bomber force, to include B-52, B-1 and B-2 Wings, the Long Range Strike Bomber program and operational and maintenance support to organizations within the nuclear enterprise. AFGSC develops and provides safe, secure and effective combat ready forces for nuclear and conventional global strike…today and tomorrow.

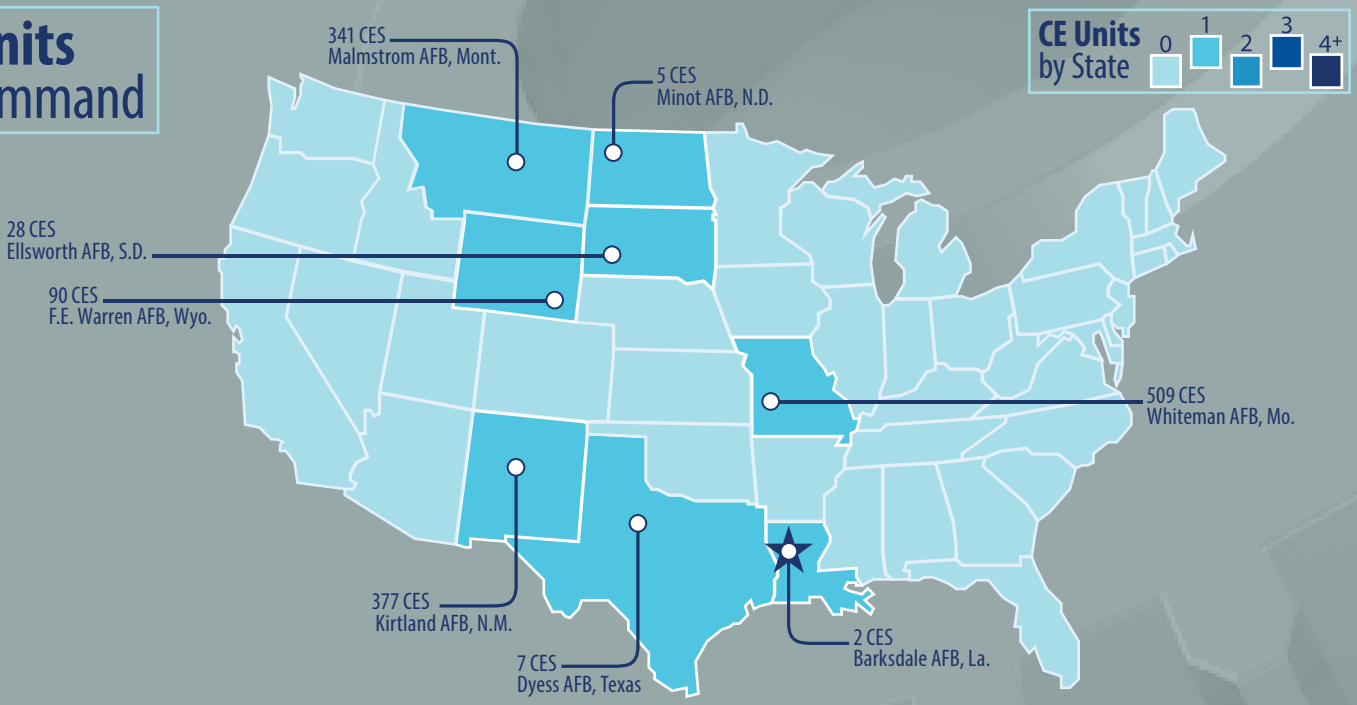
CE RESPONSIBILITIES

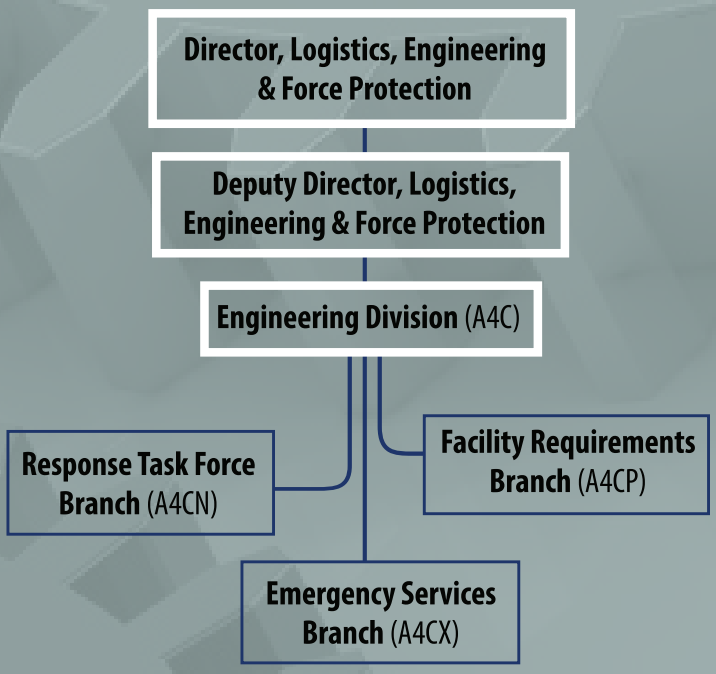
AFGSC's engineers support combat-ready nuclear and conventional forces by maintaining and operating the command's physical plant, providing firefighting, explosive ordnance disposal and emergency management functions for eight installations. AFGSC/A4C identifies, prioritizes and advocates facility and infrastructure requirements for both AFGSC missions and in support of U.S. Strategic Command. Additionally, AFGSC/A4C organizes, trains and equips the Air Force's only continental U.S.-based nuclear response task force.

SIGNIFICANT ACCOMPLISHMENTS

- Executed eight training events for nuclear weapons incident consequence management for AFGSC responders at base and headquarters levels, enhancing governmental response with key interagency involvement. Providing a venue for personnel to execute a response effort utilizing an Air Force Incident Management System/National Incident Management System environment within the unique nuclear enterprise mission.
- Hosted five Defense Nuclear Weapons School Mobile Training Teams to conduct the DoD-required Nuclear Weapons Incident Response Training Basic Course for Initial Response Force and response task force responders. Enabled training of more than 325 personnel with an estimated savings of over $372,000 and a return of more than 3,600 man-hours to AFGSC bases.
- AFGSC Radiological Incident Response and Recovery Plan 10-1 was executed and validated in support of AFGSC Headquarters Response Task Force (RTF) training exercise event. More than 400 personnel from Department of Defense, the Department of Justice and the Department of Energy participated to enhance relationships with our inter-agency and local partners and improve our response capabilities.
- Conducted first-ever Major Command Air Force Explosive Ordnance Disposal (EOD) Team of the Year competition. Reviewed flight training capabilities and identified positive and negative trends. Focused training programs across AFGSC, built esprit de corps and training cross-talk among flights.
- Enhanced Air Force EOD nuclear response capabilities. Developed/coordinated/funded joint service team leader weapon systems knowledge certification program for Navy and Air Force custodial units.

CE Units in Command





2018 statistics

Major bases	8
Plant replacement value	$30.6B
Buildings	23.6M sq. ft.
Airfield pavement	21.6M sq. yd.
Housing	7,871 units, (100 percent privatized)
Dorms	6,340 rooms
AFGSC personnel	31,000
CE personnel	
Active duty	1,798
Reserve	0
Guard	0
Civilian	825
MILCON	6 projects/$60.3M
SRM	254 projects/$259.2M
Facilities operation	$88.2M

Facing page: AFGSC enhanced explosive ordnance disposal capabilities in fiscal year 2017. Airmen with the 28th Civil Engineer Squadron construct a new EOD range on Ellsworth Air Force Base, South Dakota. *(U.S. Air Force photo)*

AFMC

Wright-Patterson AFB, Ohio
HQAFMCA4.C.AFMCA4CWORKFLOW@US.AF.MIL
Commercial: 937-656-1070
DSN: 986-1070

Ronald J. Onderko, PE
AFMC Senior Civil Engineer

COMMAND MISSION

Deliver and support agile, war-winning capabilities.

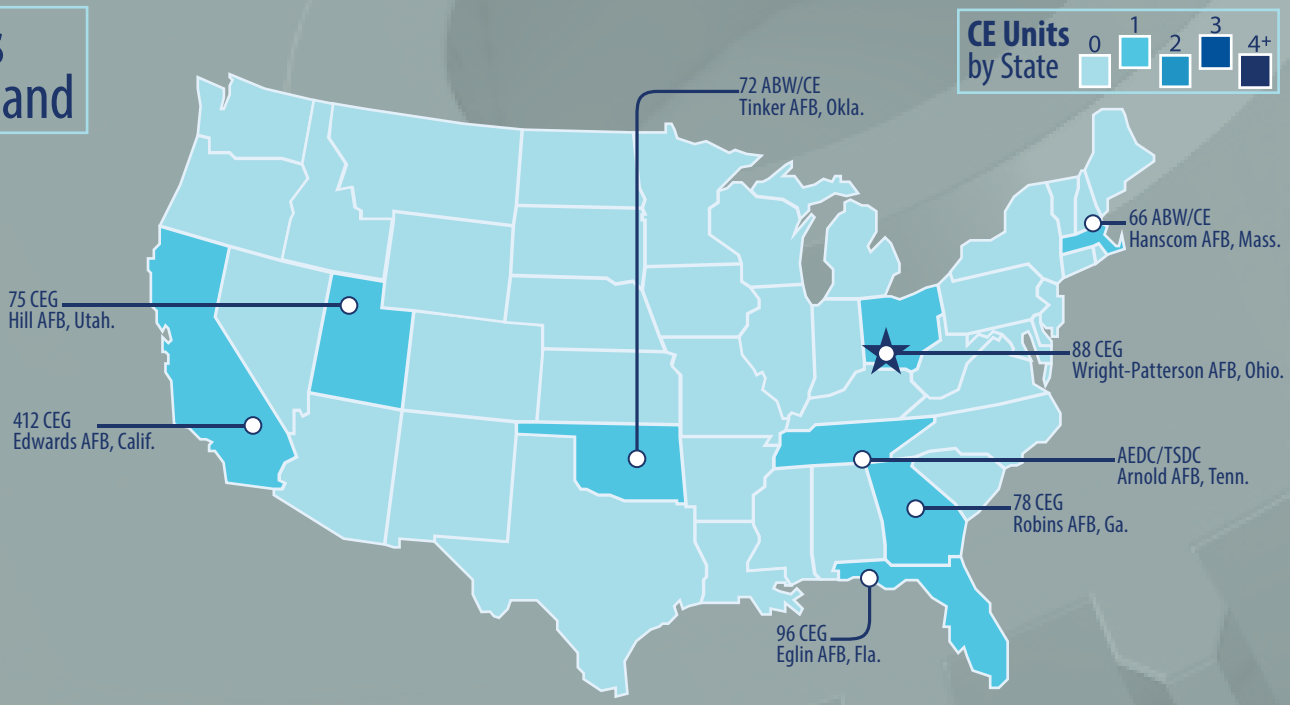
CE RESPONSIBILITIES

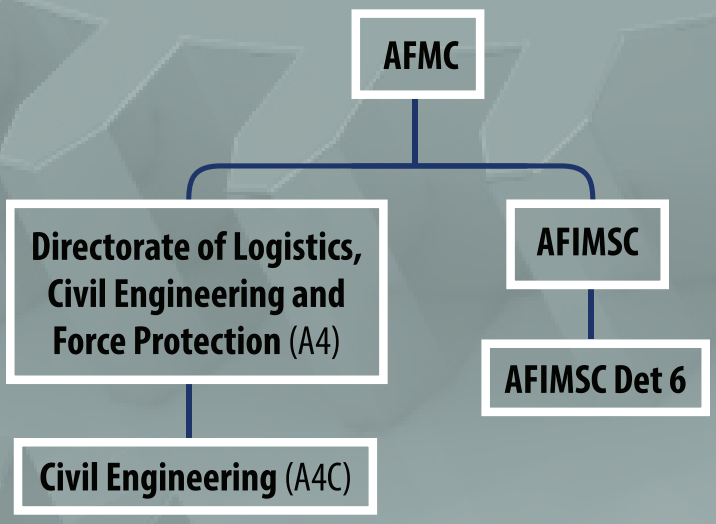
Deliver quality built and natural infrastructure, equipment and human capital assets through effective asset management planning, programming and execution oversight. Oversee Air Force Materiel Command (AFMC) Installations' Emergency Management Exercise Program. Division activities sustain and enhance AFMC's real property assets, ensure installation operational capability and enable AFMC to develop, field, facilitate and sustain war-winning capabilities and provide effective agile combat support.

SIGNIFICANT ACCOMPLISHMENTS

- Validated and prioritized AFMC fiscal 2019-2021 facility sustainment, restoration and modernization (FSRM) projects and delivered list to Air Force Installation and Mission Support Center (AFIMSC) ahead of schedule. Submittal consisted of 673 FSRM projects totaling $1.8 billion. AFMC installations expected to receive $366 million for FSRM projects in FY19. Provides for sustainment and enhancement of AFMC's real property assets and ensures installation operational capability.
- Validated and prioritized AFMC FY19 military construction (MILCON) projects — 122 projects totaling $3.2 billion — and delivered to AFIMSC on schedule. Ensuring AFMC infrastructure is adequate to support the mission of delivering war-winning and cutting edge capabilities to the warfighter.
- Developed partnership and methodology with the Air Force Sustainment Center to utilize sustainment management system data and asset management principals to inform working capital-funded depot infrastructure investments.

CE Units in Command





2018 statistics

Major bases	8
Plant replacement value	$55B
Buildings	112M sq. ft.
Airfield pavement	31M sq. yd.
Housing	6,463 units (99 percent privatized)
Dorm	3,573 rooms

AFMC personnel*		
	Active duty	18,590
	Reserve	459
	Guard	55
	Civilian	67,650
	Contractor	17,026
CE personnel		
	Active duty	466
	Reserve	32
	Guard	0
	Civilian	3,268
	Contractor	1862

**AFMC personnel numbers include AFIMSC and primary subordinate units*

Facing page: AFMC awarded a contract for the KC-46A two-bay maintenance hangar, now under construction. Mark Harbaugh of the 72nd Civil Engineer Squadron visually inspects steel forms for concrete footings that will form the base of the massive hangars on Tinker Air Force Base, Oklahoma. *(U.S. Air Force photo by Greg L. Davis)*

AFSOC

Hurlburt Field, Florida
AFSOC.A4E@US.AF.MIL
Commercial: 850-884-2371
DSN: 579-2371

Col Christopher K. Fuller
Deputy Director of Logistics, Engineering and Force Protection and Command Civil Engineer for AFSOC

COMMAND MISSION

Air Force Special Operations Command provides our nation's specialized airpower, capable across the spectrum of conflict … Any Place, Any Time, Anywhere. The command's Special Operations Forces (SOF) are composed of highly trained, rapidly deployable Airmen, conducting global special operations missions ranging from precision application of firepower to infiltration, exfiltration, resupply and refueling of SOF operational elements. AFSOC's core missions include battlefield air operations, agile combat support, aviation foreign internal defense, information operations/military support operations, precision strike, specialized air mobility; command and control; and intelligence, surveillance and reconnaissance.

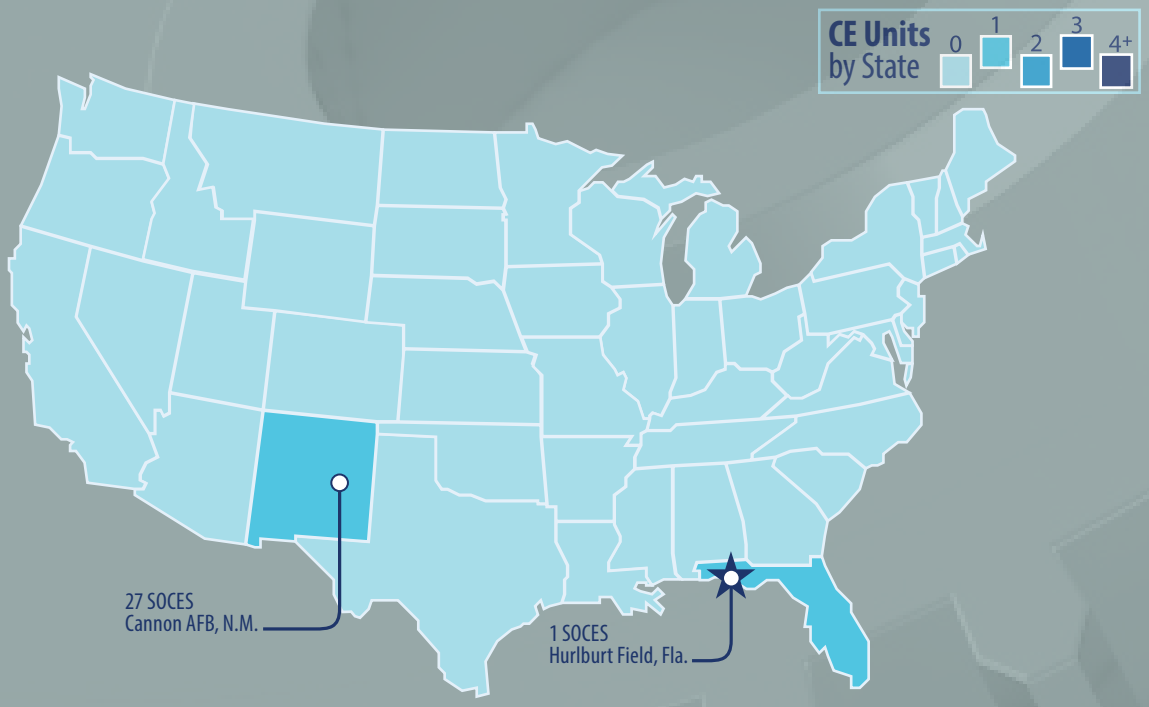
CE RESPONSIBILITIES

Plans, programs, resources and manages CE processes and resources enabling the air component of U.S. Special Operations Command to execute its mission. Executes $80 million in annual appropriations, supports more than 20,000 special operations forces at 35 locations worldwide and advises the AFSOC commander on base development and sustainment, integrated defense, security, force protection and expeditionary combat support. Provides specialized agile combat support by employing installation engineering, expeditionary engineering, readiness and emergency management, fire and emergency services and explosive ordnance disposal (EOD) in garrison and at overseas contingency locations. To further enable U.S. Special Operations Command's elite forces mission, provides expeditionary bed-down support for deployed personnel in contingency locations for up to 30 days using AFSOC-unique air rapid response kits (ARRK).

SIGNIFICANT ACCOMPLISHMENTS

- Deployed 157 engineers to 15 locations in Southwest Asia, Africa, Central America and South America in direct support of USSOCOM and Air Force missions.
- Deployed 65 ARRK unit type codes worth $15.2 million in support of Special Operations Forces contingency bed-down requirements around the globe.
- Continued support of 70,000-acre Melrose Air Force Range, New Mexico, into the Department of Defense's premier SOF air/ground operations range. Over $7 million of projects completed this past year in support of the $50 million planned range improvements.
- Completed three (two Air Force/one SOF) military construction (MILCON) projects valued at $126 million, providing new facilities and infrastructure supporting Air Force commandos conducting special operations across the globe. Of note, completed construction on the $65 million Cannon Air Force Base, New Mexico, medical/dental clinic, which won an Honor Award for facility design in the 2018 Air Force Design Awards.
- Awarded two MILCON projects valued at $32 million at Cannon AFB, and Fort Bragg, North Carolina, to continue AFSOC mission growth.
- Continued execution of 57 (Air Force/SOF) MILCON projects valued at $1.3 billion to provide combat-ready forces.

CE Units in Command



Installations Division (A4I)

Civil Engineer Branch (A4IC)

Security Forces Branch (A4IS)

2018 statistics

Major bases	2
Plant replacement value	$8.2B
Buildings	8.1M sq. ft.
Airfield pavement	2.8M sq. yd.
Housing	1,202 units (100 percent privatized)
Dorms	1,791 rooms

AFSOC personnel

Active duty	14,065
Reserve	1,470
Guard	1,760
Civilian	1,776
Contractor	1,310

CE personnel

Active duty	519
Reserve	111
Guard	148
Civilian	226
Contractor	75

MILCON	13 projects/$216.2M
SRM	48 projects/$27.4M*
Facilities operations	$14.7M

**Excludes $1.8M for SOF (MFP-11) funded projects*

AFSPC

Peterson AFB, Colorado
A4C.WF@US.AF.MIL
Commercial: 719-554-5948
DSN: 719-554-5948

Michelle A. Linn
AFSPC Lead Engineer

COMMAND MISSION

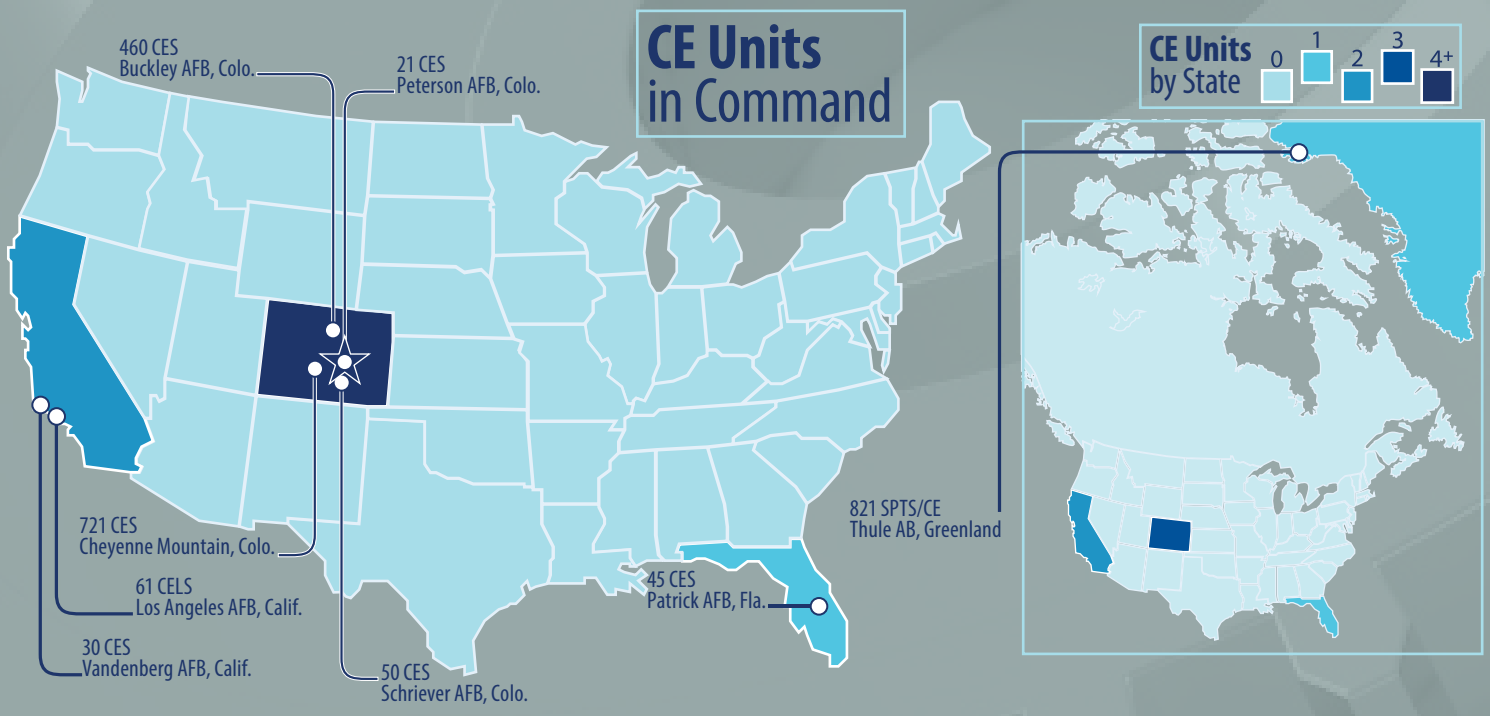
Provide resilient, defendable and affordable space and cyberspace capabilities for the Air Force, Joint Force and the nation.

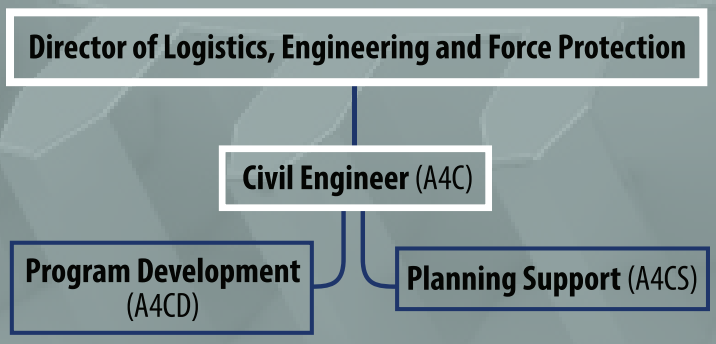
CE RESPONSIBILITIES

Validates, prioritizes and advocates for direct mission related requirements. Provides deliberate and adaptive planning support for civil engineer (CE) functions to Air Force Space Command (AFSPC) missions worldwide. Interface with deputy secretary of the Air Force for environment (SAF/IEE), Headquarters Air Force /A4C, Air Force Civil Engineer Center and Air Force Installation and Mission Support Center on behalf of AFSPC missions worldwide.

SIGNIFICANT ACCOMPLISHMENTS

- Successfully advocated for 109 AFSPC infrastructure requirements totaling $121.2 million for the fiscal 2019 construction task order (CTO). The FY19 CTO provides installations the authority to advertise the 109 projects supporting critical space mission facilities and infrastructure.
- Developed and completed a planning charrette for a new $148 million consolidated space operations facility (CSOF) in less than 3 months. The CSOF, AFSPC-1 and Space Superiority Core Function Leads-1 priority, was ranked as the Air Force number one existing mission military construction (MILCON) for FY20. The project constructs an adequate facility to consolidate Joint Force Space Component operations and staff.
- Adopted uptime institute tier system as the approved standard for AFPSC infrastructure resilience and mission assurance. AFSPC commander approved implementation of the uptime institute tier standards as a way to normalize AFSPC mission requirements for mission owners and civil engineering infrastructure resiliency and readiness. This application will allow AFSPC to evaluate requirements against an established and understandable world-wide industry standard to determine infrastructure availability in a facility.
- Collaborated with Financial Management Center of Expertise to quickly analyze contractor-provided dormitories for Thule Air Base, Greenland; successfully documented for first time to SAF/IEE the economic advantages of government-provided lodging.





2018 statistics

Major bases	7
Launch ranges	2
Stations	9
Plant replacement value	$20.3B
Buildings	30.2M sq. ft.
Airfield pavement	4.8M sq. yd.
Housing	3,504 units
Dorms	2,708 rooms
AFSPC personnel	**27,488**
Active duty	9,537
Reserve/Guard	2,682
Civilians	6,574
Contractors	8,695
CE personnel	**3,643**
Active duty	769
Reserve/Guard	247
Civilians	1,063
Contractors	1,564
MILCON	10 projects/$175M
SRM	107 projects/$164.1M
Facilities operations	$123.9M

Facing page: The AFSPC commander's top priority in fiscal year 2017 was to accelerate a $38 million overhaul of the Buckley Space-Based Infrared System (SBIRS) Operations Facility at Buckley Air Force Base, Colorado, to fiscal year 2018. The project replaces unsafe facilities and provides reliable power to the critical SBIRS mission. *(U.S. Air Force file photo)*

AMC

Scott AFB, Illinois
AMCA4-42@US.AF.MIL
Commercial: 618-229-1908
DSN: 779-1908

Col Randy L. Boswell
Chief, Logistics & Civil Engineer
Operations Division

COMMAND MISSION

Provide global air mobility...right effects, right place, right time.

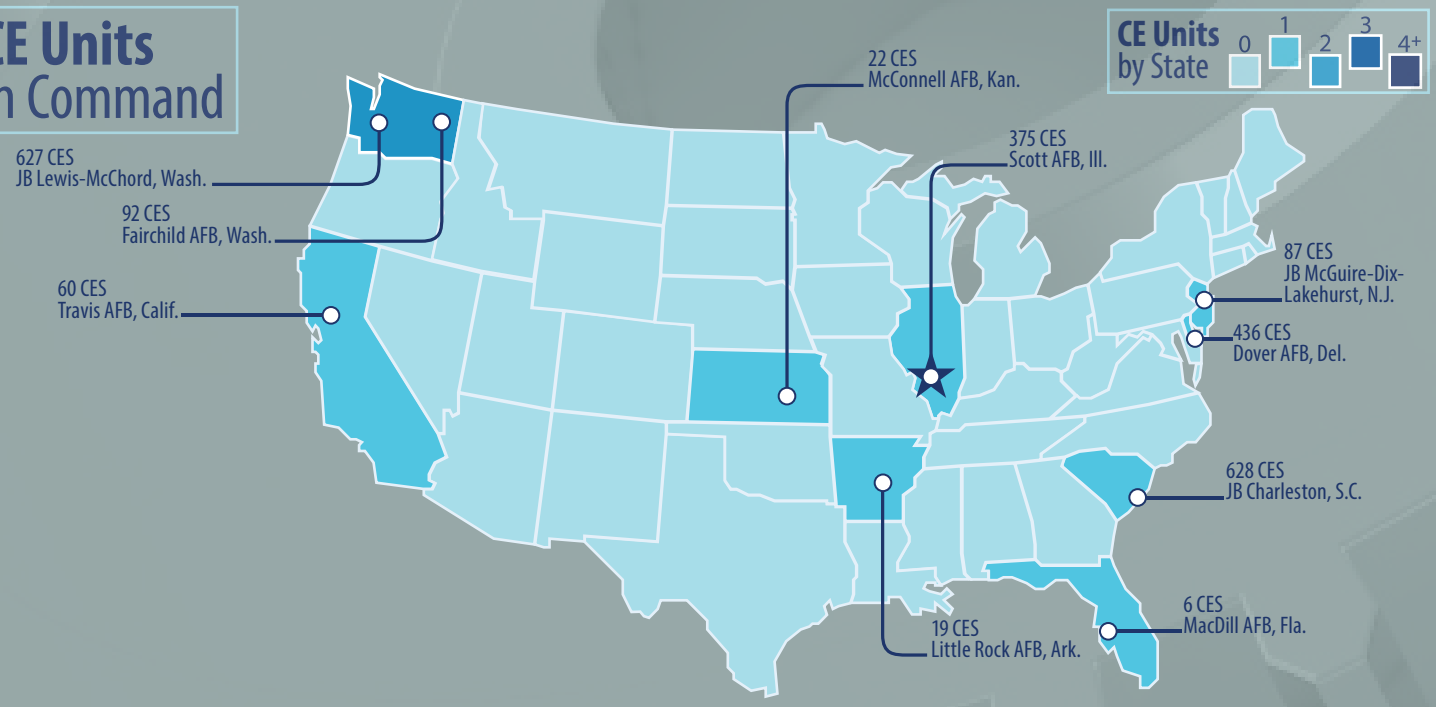
CE RESPONSIBILITIES

Validates, prioritizes and advocates for mission-driven requirements and effectiveness of the global air mobility and en route infrastructure. Provides Air Force transportation operational-level planning and direction of emergency responses and contingency operations of civil engineer emergency services, consisting of fire emergency services, explosive ordnance disposal and emergency management. Postures and deploys U.S. Transportation Command-assigned Air Force civil engineer and mission support group command and control forces in support of combatant command requirements worldwide. Provides direct geospatial information and services to planners, operators and contingency response forces to enable world-wide rapid global mobility.

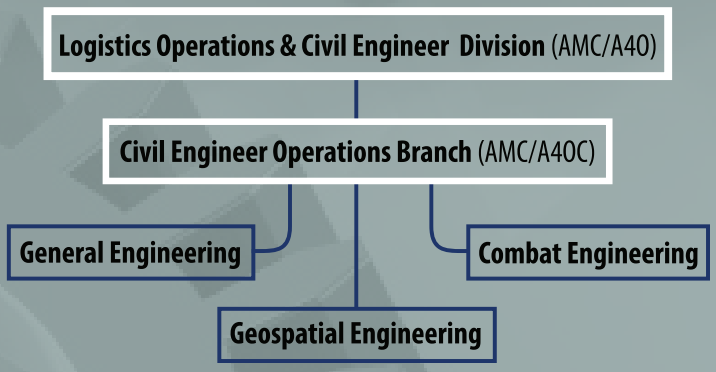
SIGNIFICANT ACCOMPLISHMENTS

- Developed and advocated for fiscal 2019-2021 future years defense plan with 572 requirements valued at more than $1.3 billion supporting KC-46A, and Presidential Airlift Recapitalization new mission bed-downs and AMC continental U.S. (CONUS) existing mission requirements.
- Developed a $162 million AMC en route transportation working capital fund facilities and infrastructure-prioritized project investment plan consisting of 97 projects.
- Conducted eight AMC CONUS and global en route infrastructure assessment visits, validated critical requirements and led collaborative advocacy.
- Successfully validated and advocated for six Mobility Air Force (MAF) requirements valued at $76.4 million, prioritized by the Global En Route Infrastructure Steering Committee to mitigate operational risk across three Geographic Combatant Commander (GCC) areas of responsibility (AORs).
- Deployed 387 personnel and 16.4 short tons of equipment to 28 installation across 15 countries and four GCC AORs.
- Provided engineer management expertise to Air Force Forces through deliberate and adaptive planning support of combatant commands and numbered Air Forces concept of operations plans, operation plans, and executive orders.
- Provided Headquarters Air Force Strategic Deterrence and Nuclear Integration (A10), Operations, Plans, and Requirements for 18AF/A3, Strategic Planning Policy Directorate (PACOM/J54), Strategic Deterrence and Nuclear Integration of AMC /A3D & A10N) with chemical, biological, radiological and nuclear (CBRN) subject matter expert guidance for defense activities in support of deployed mobility air forces.
- Identified and recommended course of action for critical CBRN shortfalls and deficiencies to ensure the Air Force warfighter can survive and operate in a CBRN environment.
- Developed and fielded four small emergency management/CBRN unit type codes for direct support to the 621 Contingency Response Wing U.S. Transportation Command port opening mission.
- Augmented AMC Inspector General, providing civil engineer subject matter expertise and oversight to four installations.
- Completed initial global data collection with installation geospatial information and services (IGI&S) data from Air Force Installation and Mission Support Center entities, as well as overseas U.S. Navy GeoReadiness program offices, to provide new geospatial capabilities for AMC's Global En Route Infrastructure Asset Visibility (GERI-AV) initiative.
- Embedded geospatial engineer support within Operations, Plans, and Requirements for 18AF/A3 continues to aid AMC/AFTRANS (Air Force Transportation) global operating location site and situation awareness. Developed a classified geospatial web capability for AMC/AFTRANS planners to enable rapid global mobility response.

CE Units in Command



- Led Air Force logistics community's establishment of a logistics geospatial information and services (LGI&S) objective within the AF/A4 Flight Plan under the "Meet and Enhance Mission Generation" capability. Future LGI&S capabilities to support Air Force Logistics, Engineering, and Force Protection (AF/A4) priority capabilities including "Set the Theater" and "Multi-Domain Logistics Command and Control."



2018 statistics

Major bases	9
Plant replacement value	$31B
Buildings	60M sq. ft.
Airfield pavement	17.7M sq. yd.
Housing	4,659 (privatized)
Dorms	21,641 rooms (non-privatized)*

AMC personnel	
Active duty	39,891
Reserve	14,893
Guard	43,141
Civilian	9,159
CE personnel	
Active duty	2,041
Reserve	791
Guard	3,198
Civilian	1,377
Contractor	672

MILCON	Current Msn: 2 Projects ($9.1M) Active New Msn: 13 Projects ($418M)
SRM	118 projects/$170.5M
TWCF	$28.3M
Facilities operations	$161.8M

* Includes Air Force, Army, and Navy dorms at JB McGuire-Dix-Lakehurst, New Jersey, and JB Charleston, North Carolina, but excludes dorms at non-Air Force-led Joint Base Lewis-McChord, Washington, and Pope Army Airfield.

PACAF

JB Pearl Harbor-Hickam, Hawaii
PACAF.A4C.ENGINEERING@US.AF.MIL
Commercial: 808-449-2884
DSN: 315-449-2884

Col Dwayne M. Robison
Chief, Civil Engineer Division

COMMAND MISSION

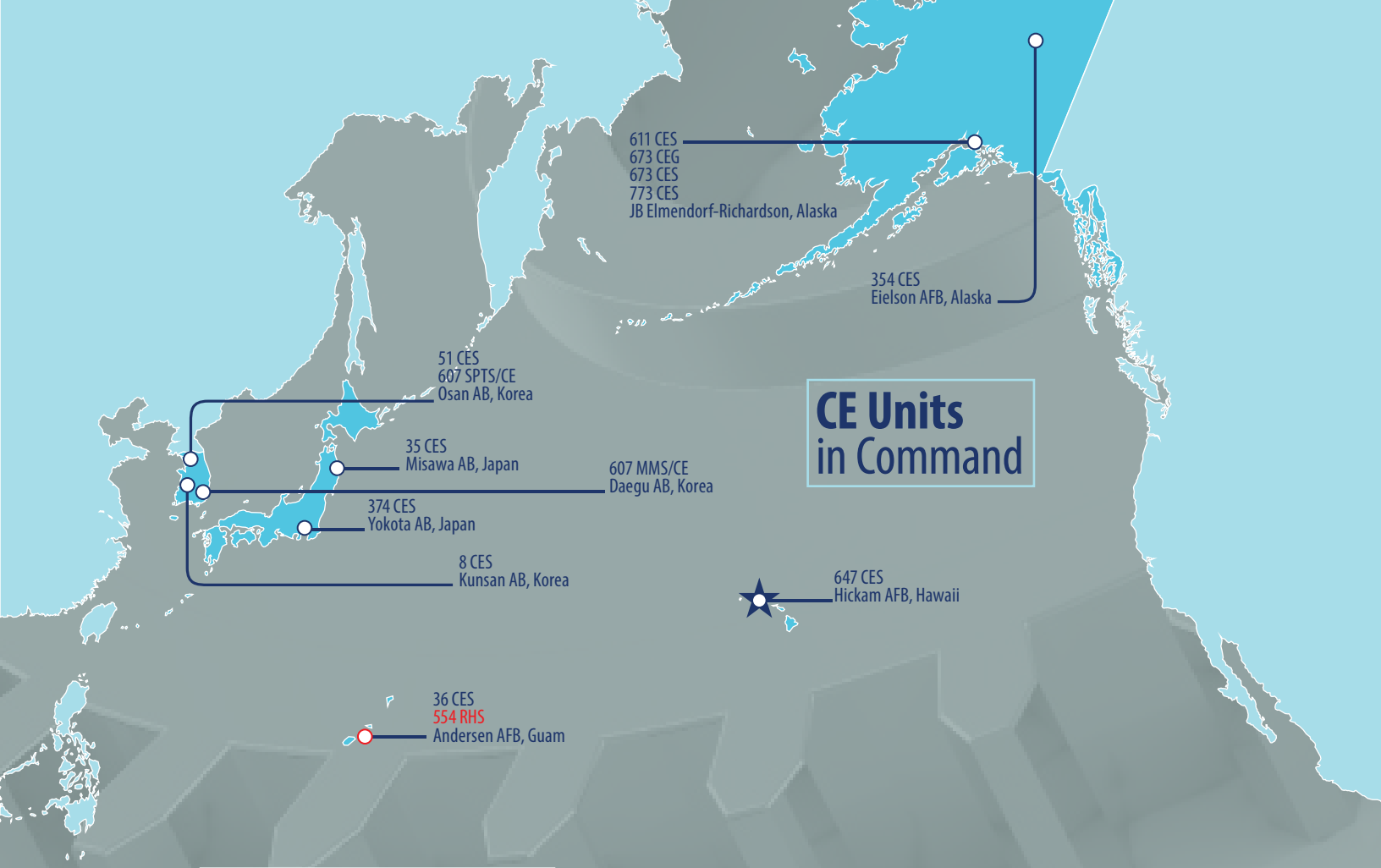
Pacific Air Forces delivers rapid and precise air, space and cyberspace capabilities to protect and defend the United States and its territories, allies and partners; provides integrated air and missile warning and defense; promotes interoperability throughout its area of responsibility (AOR); maintains strategic access and freedom of movement across all domains; and is postured to respond across the full spectrum of military contingencies in order to restore regional security.

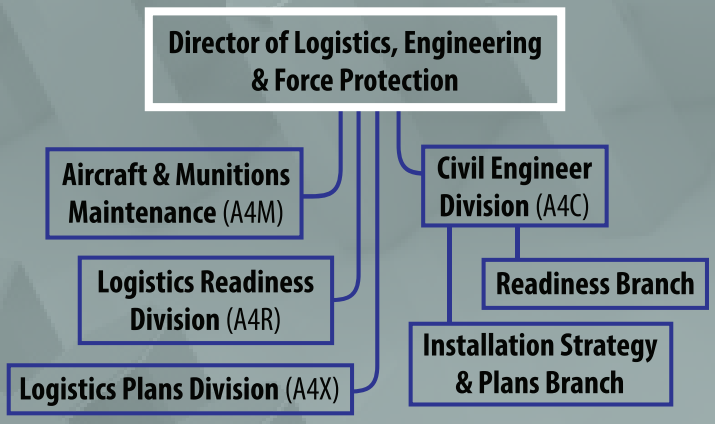
CE RESPONSIBILITIES

The PACAF Civil Engineering Division plans and directs engineer forces to shape the theater, build partnerships, deter our enemies and prepare to win the fight tonight in an AOR that includes 60 percent of the world's population, five of the 10 largest economies, five of seven U.S. treaty allies, seven of 11 of the world's largest democracies, seven of 10 of the world's largest armies, and four of eight of the world's largest missile arsenals. PACAF faces 80 percent of all natural disasters in this AOR. This region is challenged with terrorism, organized crime, drug and human trafficking, territorial disputes, rising near-peer powers, unprecedented anti-access and area denial capability, the tyranny of distance and a long history of cultural and historic strife. The division provides adaptive planning for two operational plans and 10 concept-of-operation plans and injects civil engineering expertise to drive leading-edge resiliency initiatives for distributed operations and passive defense.

SIGNIFICANT ACCOMPLISHMENTS

- Spearheaded an effort to advocate for fielding of an expeditionary rapid damage repair capability. Secured a spot on U.S. Indo-Pacific Command's integrated priority list, garnering $9 million for a Joint Capability Technology Demonstration in fiscal 2018. The proposed solution will provide a more flexible damage repair capability with a lighter logistics footprint.
- Fielded the Air Force's first increment of rapid airfield damage assessment (RADAS) capability with 16 small unmanned aerial systems across four locations. The $2.7 million interim RADAS solution supports base resiliency initiatives in the Indo-PACOM theater of operations. Secured $4.4 million to expand the interim solution to an additional 6 locations.
- Advocated and fielded a $1.3 million interim remote mass mechanical clearance solution for 10 Indo-PACOM locations in support of rapid airfield damage repair (RADR) operations.
- Led effort to synchronize and collaborate with U.S. Indo-PACOM service component engineers, briefing 70 senior engineering leaders on emergent issues in the theater. Efforts focused on stimulating joint and partner nation interoperability and leveraging unique service chemical, biological, radiological and nuclear (CBRN) to support existing plans.
- Organized and executed a US-Japan key leader engagement focused on airfield damage repair, command and control, explosive ordnance disposal, and CBRN capabilities. The meeting resulted in the signing of a memorandum of understanding, securing bilateral cooperation and partnership on 11 CE-specific operations, activities, and actions.
- Developed 10 exercise-related construction projects worth $21 million that bolster interoperability with partner nations and support joint service exercises in the Philippine Islands and Thailand.
- Deployed 201 engineers in support of PACOM requirements. Supported Indo-PACOM's Theater Campaign Plan by executing 22 CE engagements and four COCOM exercises with 13 partner nations.
- U.S. Air Force and Republic of Korea engineers participated in the fourth annual Pacific Unity Base Resiliency and Airfield Damage Repair engagement at Daegu Air Base, Republic of Korea, which included bilateral information exchanges on tactics, techniques and procedures for airfield damage repair process and concluded with an integrated airfield damage repair exercise to demonstrate hands-on interoperability.





Above: Members of the 35th Civil Engineer Squadron on Misawa Air Base, Japan, hosted engineers with the Japan Air Self-Defense Force for a bilateral engagement event focusing on base recovery and interoperability. An engineer tries on an M50 gas mask during the bilateral exchange. *(U.S. Air Force photo by Senior Airman Deana Heitzman)*

- Innovated CE project development team concept to facilitate 'COB Warm' concept of operations in the Korean Theater of Operations. Tasked 72 engineers, identifying over $699 million in "fight tonight" infrastructure requirements. Delivered 217 short tons of material, 142 personnel, and 4,000 Air National Guard/U.S. Air Force Reserve man-days to eliminate base support plan limiting factors.
- Spearheaded CE Headquarters Air Force readiness synchronization efforts in the Pacific, adjudicating over 90 line items related to CE unit type code and operation plan readiness.

USAFE-AFAFRICA

HQ USAFE-AFAFRICA/A4C
Ramstein AB, Germany
HQUSAFE-AFAFRICA.A4C.CivilEngineerDiv@us.af.mil
Commercial: 49-6371-47-6773
DSN: 314-480-6773

Col Christopher M. Stoppel
Chief, Civil Engineer Division

COMMAND MISSION

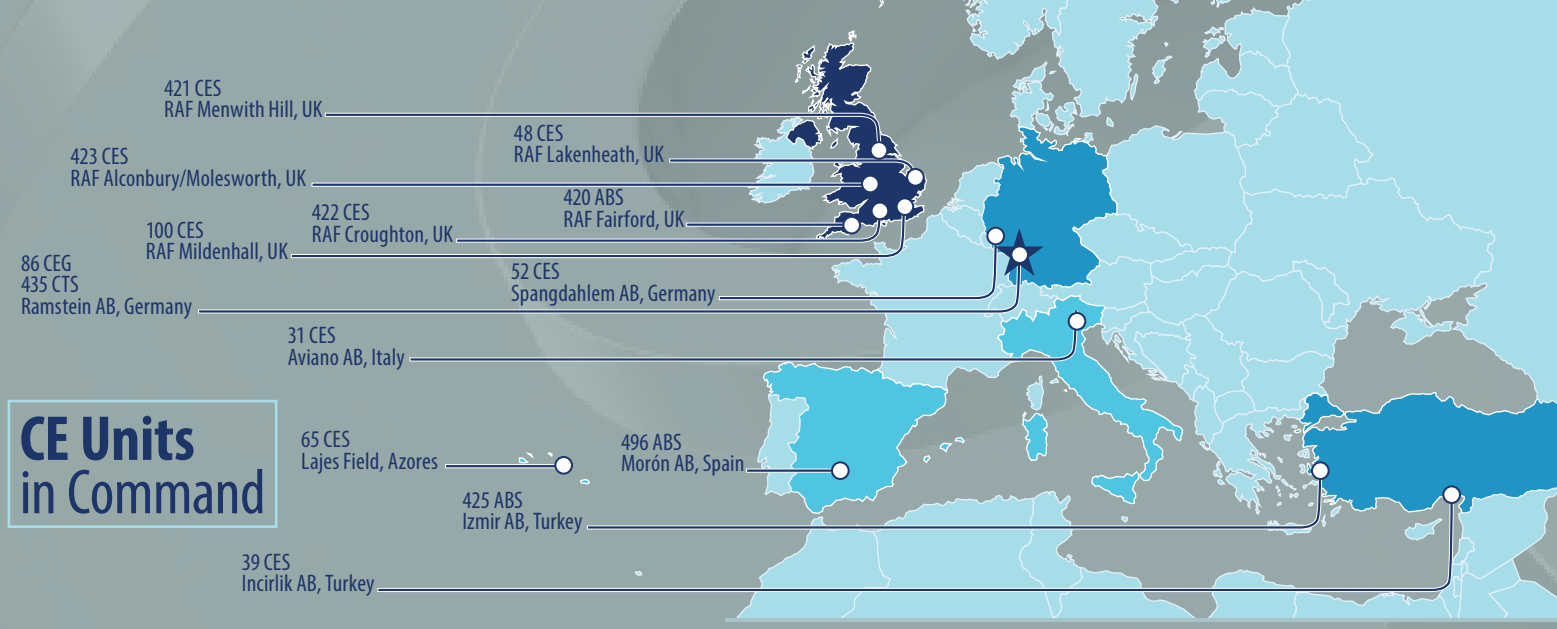
As the air component for both U.S. European Command (USEUCOM) and U.S. Africa Command (USAFRICOM), USAFEAFAFRICA executes the Air Force, EUCOM and AFRICOM missions with forward-based airpower and infrastructure to conduct and enable theater and global operations. USAFE directs air operations in a theater spanning three continents, covering more than 19 million square miles, containing 104 independent states and possessing more than a quarter of the world's population and more than a quarter of the world's gross domestic product.

CE RESPONSIBILITIES

Headquarters USAFE-AFAFRICA/A4C provides expeditionary and contingency engineering operational support and planning to enable combat, humanitarian assistance, sustainable infrastructure, emergency services and building partnership capabilities throughout the European and African theaters of operation. Further, A4C represents USAFE-AFAFRICA on the Strategic Governance Board for the Next Generation Estate Contracts-United States Forces Prime, providing engineer support worth $86 million annually to six United Kingdom installations. Finally, A4C continues to manage infrastructure improvements as outlined in the European Deterrence Initiative (EDI) and the NATO Security Investment Program (NSIP)

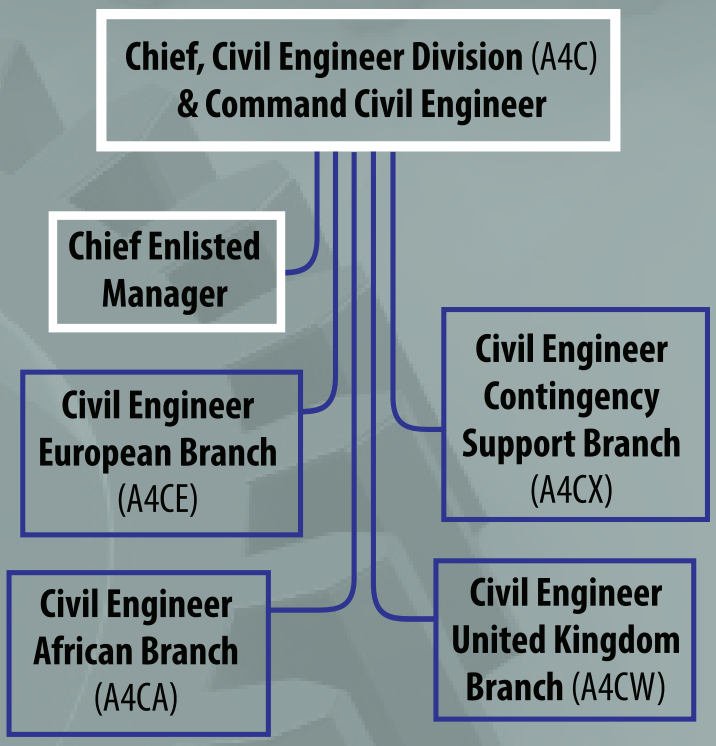
SIGNIFICANT ACCOMPLISHMENTS

- In FY18, executed and planned $270.9 million for 13 military construction (MILCON) projects and $76.1 million for 48 operations and maintenance (O&M) projects supporting EDI in 13 countries. Programmed five EDI projects in four countries for FY19 valued at $344.4 million to bolster airfield capability and readiness to support bilateral and multilateral operations, exercises and training with allies and partners. Developed storage facility plans to accommodate the European Contingency Air Operations Set Deployable Airbase Systems-Facilities Equipment and Vehicles (DABS-FEV) equipment. These facilities deter near-peer adversarial threats and facilitate rapid deployment at forward operation locations.
- Coordinated with 17 host nations, providing program management over 114 NSIP projects in nine NATO capability packages, totaling nearly 434 million euros. Postured 30 projects valued at 292 million euros to receive recoupment from NATO that were initially funded by the U.S.
- Executed the first-ever DABS-FEV deployment concept exercise, utilizing three modes of transportation to deploy, receive, stage, employ and redeploy 27 percent of a DABS-FEV capability at a non-US European location from war reserve materiel storage within a 30-day window.
- Executed Exercise Diamond Falcon II, which combined over 300 allied personnel from two NATO countries, three U.S. military services, the U.S. Departments of Justice, Energy, and State for the first bi-lateral nuclear accident/incident response exercise between the U.S. and a European host-nation.
- Postured, trained and deployed 15 personnel and $350,000 in equipment in support of NATO exercise "SRBIJA 18" as part of a joint Air Force and Army team. This represents the first time in the exercise's 18-year history that USAFE participated.
- Coordinated 5,700 Air National Guard and Air Reserve Component man-hours in support of Exercises Blue Flag, Austere Edge, Juniper Cobra, Judicious Response and Epic Guardian; Prepped EUCOM for critical wartime mission and augmented heavily tasked HQ-USAFE staff.
- Supported EUCOM's exercise-related construction program. Integrated a total force engineer team to complete four construction projects in Israel worth $3.9 million.



CE Units in Command

- Enabled the redistribution of $922,000 in reconstituted WRM from EUCOM to AFRICOM to improve sustainability and quality of life throughout bases in Africa.
- Postured, aggregated and deployed 12 personnel, equipment and vehicle unit type codes in support of expanded explosive ordnance disposal operations in Niger, Africa, representing the first such movement since Operation Desert Shield/Desert Storm.
- Deployed 314 combat-trained USAFE engineers to three combatant commands across three continents.
- Executed a $60 MILCON project in Niger, including a life support area, three hangars, aircraft parking aprons and a 6,200-foot runway. The 31st Expeditionary Rapid Engineer Deployable Heavy Operational Repair Squadron Engineer's construction effort constitutes the largest-ever Air Force troop labor construction project.
- Managed two MILCON projects valued at $10.5 million and seven O&M projects valued at $6.6 military in Djibouti, Africa, coordinated four O&M projects valued at $2.6 million in Kenya, Africa, and oversaw O&Mprojects in Chad and Tunisia, Africa, valued at $1.8 million.
- Developed execution plans for Djibouti's Chabelley Airport's $3.6 million MILCON project to construct an access road to connect two AFRICOM installations and coordinated the construction effort for a $6.9 million parking apron and taxiway expansion.
- Deployed two 12-man teams to construct four large area maintenance shelters (LAMS), improving partnership relations with the government of Chad in support of the presidential drawdown execution order following a devastating storm.



2018 statistics

Major bases	6
Plant replacement value	$24.8B
Buildings	51.4M sq. ft.
Airfield pavement	12.2M sq. yd.
Housing	5,657 units (not privatized)
Dorms	7,103 rooms

USAFE-AFAFRICA personnel

Active duty	28,423, including tenant units
Civilian	6,402
AFRC/ANG	197
Contractors	2,026

CE personnel

Active duty	1,655
Civilian (U.S.)	97
Civilian (local)	1,865
Contractor	973

AFDW

JB Andrews, Maryland
A4: USAF.JBANAFW.AFDW-STAFF.MBX.
AFDW-A4-7-WORKFLOW@MAIL.MIL
A4C: USAF.JBANAFW.AFDW-STAFF.MBX.
AFDW-A7C-WORKFLOW@MAIL.MIL
Commercial: 240-612-6210
DSN: 612-6210

Col Larry Harris
Director, Logistics, Engineering and Force Protection

COMMAND MISSION

The Air Force District of Washington reports to the Air Force Chief of Staff and serves as the Air Force service component to the Joint Force Headquarters-National Capital Region (JFHQ-NCR), providing the designated single Air Force voice for planning and implementing Air Force and joint solutions concerning the NCR. AFDW organizes, trains, equips and provides forces within the NCR for world-wide employment and Air Expeditionary Force deployments and prepares and conducts, when directed, homeland operations within the NCR. AFDW executes specified military department statutory responsibilities for administration and support of Headquarters Air Force and assigned Air Force units and personnel within the NCR and worldwide. AFDW provides headquarters support to the 11th Wing, 844th Communications Group and the U.S. Air Force Band and Honor Guard.

CE RESPONSIBILITIES

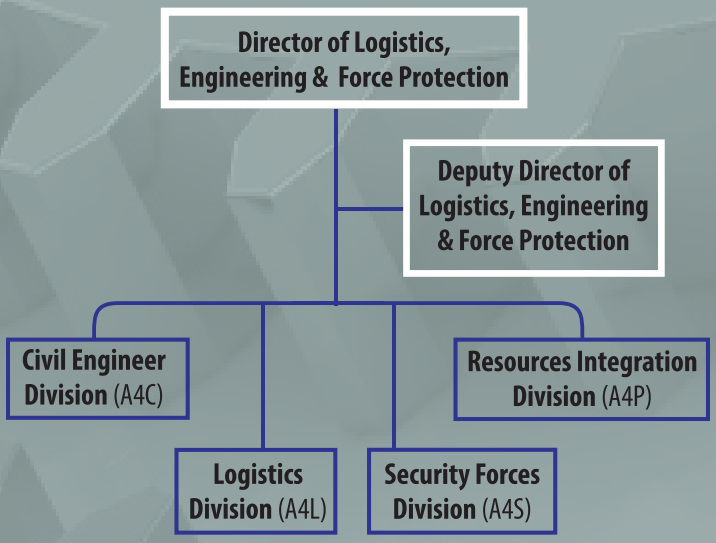
AFDW civil engineers provide assigned forces to the JFHQ-NCR. They conduct deliberate planning and prepare for consequence management in the NCR, supporting senior leader protective services and continuity of government. AFDW engineers provide airfield and base infrastructure supporting reception and staging of forces at Joint Base Andrews, Maryland, aerospace control and defense over the NCR and distinguished visitor aerial transport. AFDW engineers maintain the high-visibility Air Force Memorial site and enable no-fail support to Air Force One.

SIGNIFICANT ACCOMPLISHMENTS

- Rebuilding America's airfield — garnered Deputy Assistant Secretary of the Air Force for Installations, Environment and Energy approval of a $129 million, four-phased project to replace Taxiway Whiskey, enabling $35.6 million FY17 funding and award.
- Garnered regulator support and established first-ever Air Force Wetlands and Stream Mitigation Bank in 2018 for Joint Base Andrews; advocated for $12 million investment in FY17 and FY18.
- Shaped the design of the $312 million Presidential Aircraft Recapitalization (PAR) program, delivering critical infrastructure in support of PAR's initial operating capability.
- Successfully advocated for 57 projects $46 million in infrastructure and facility projects in FY17.
- Earned $60 millionin facilities sustainment, restoration and modernization (FSRM) in FY18 construction tasking order for 15 projects.
- Advocated for FY17 military construction (MILCON) program resulting in a $66.5 million investment (consolidated communications center, firing range and Joint Air Defense Operations Center relocation) at Joint Base Andrews.
- Advocated for FY18 MILCON program resulting in a $271.5 million investment (PAR complex and land acquisition) at Joint Base Andrews.
- Validated and prioritized five current-mission FY19-FY23 MILCON program valued at $277 million.
- Validated, prioritized and advocated for FY18 unspecified minor military construction (UMMC) requirements; $2 million vehicle operations facility funded to consolidate three facilities in support of logistics readiness squadron mission.
- Engaged with AFCEC, the Naval Facilities Engineering Command and the 11th Wing to award $1.5 million for demolition of current munitions storage area (MSA).
- Enabled construction of a $28.8 million Army and Air Force Exchange Services base exchange expansion project, which combines six stores and adds 60 thousand square feet to the facility. This project is set to impact 90,000 patrons yearly.
- Accomplished $3.1 mission in facility repairs for the Presidential Airlift Group.
- Improved Joint Base Andrews quality of life through 13 projects worth $3.7 million, to include renovations to the youth center, child development centers one and two, the East gym and dorm lighting projects.
- Re-certified 13 fitness tracks across six locations in the NCR, validating mandatory Air Force physical fitness tests for 38,000 military personnel annually.
- On track for completion of $230.5 million Malcolm Grow Ambulatory Care Center and new $22.8 million dental clinic.
- Enabled construction of $22 million critical helicopter operations facility MILCON project for AFDW no-fail national missions.

CE Units in Command

- Managed logistical and ceremonial support for the 58th Presidential Inauguration and the the 70th Air Force Anniversary Air & Space Expo, while continuing to support two national special security events and over 200 President of the U.S. and world leader movements.



2018 statistics

Major bases	1
Plant replacement value	$5.6B
Buildings	6.2M sq. ft.
Airfield pavement	2.5M sq. yd.
Housing	1,115 units (100 percent privatized)
Dorms	634 rooms

AFDW personnel*

Active duty	3,455
Reserve	96
Civilian	1,001

CE personnel

Active duty	329
Reserve	5
Full-time civilian	133
Term civilian	4
Contractor	5

MILCON	12 projects/$793M
SRM	61 projects/$255M
Facilities operations	$27M

**AFDW executes worldwide accountability and support to 40,000+ Airmen not assigned to a MAJCOM or an Air Force installation*

Malcom Grow Medical Clinic and Surgery Center – Phase 2 Construction *(U.S. Air Force photo)*

AFRC

Robins AFB, Georgia
AFRC.A4LOGISTICS@US.AF.MIL
Commercial: 478-327-1103
DSN: 497-1103

Col James P. Hickman
Associate Director of Logistics, Engineering and Force Protection

COMMAND MISSION

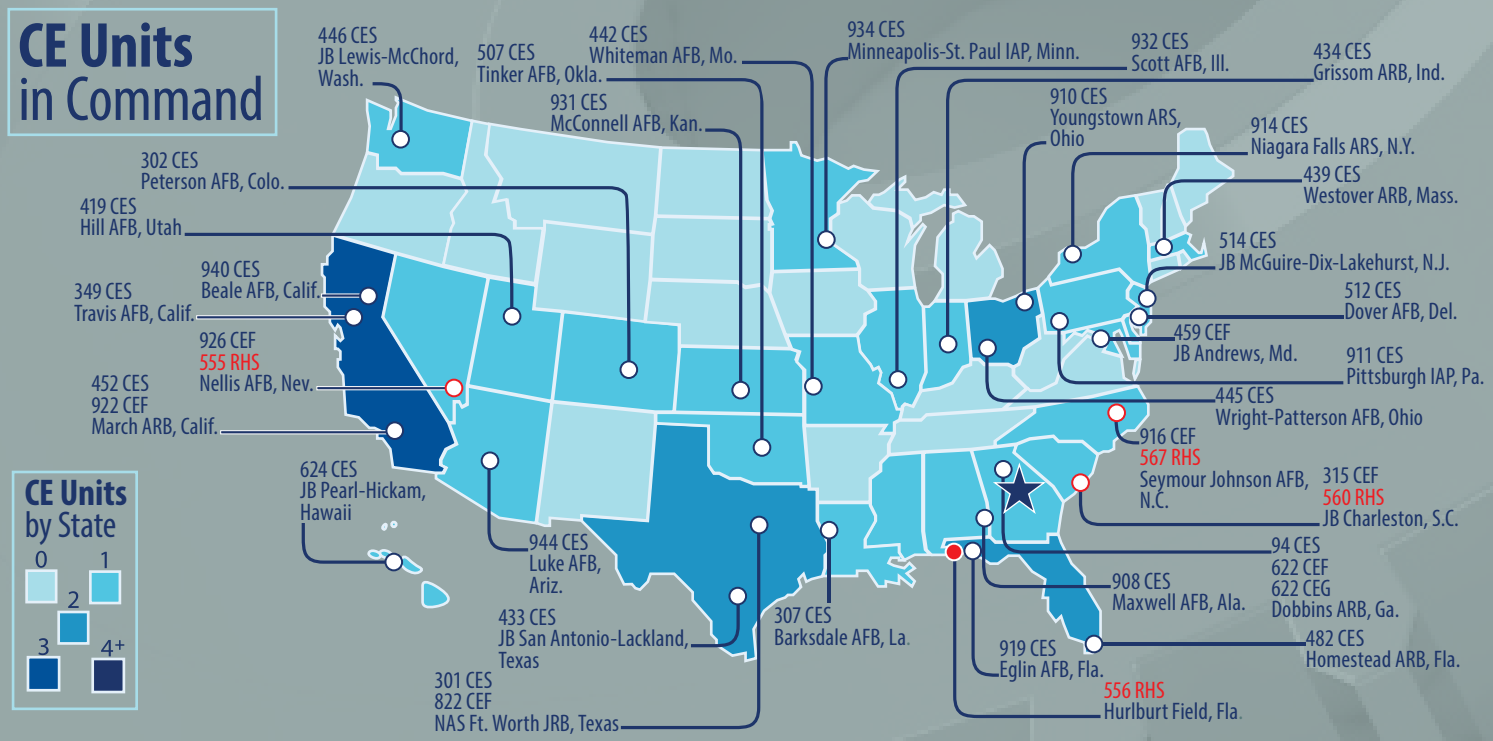
Provide combat-ready engineers to meet combatant commander requirements.

CE RESPONSIBILITIES

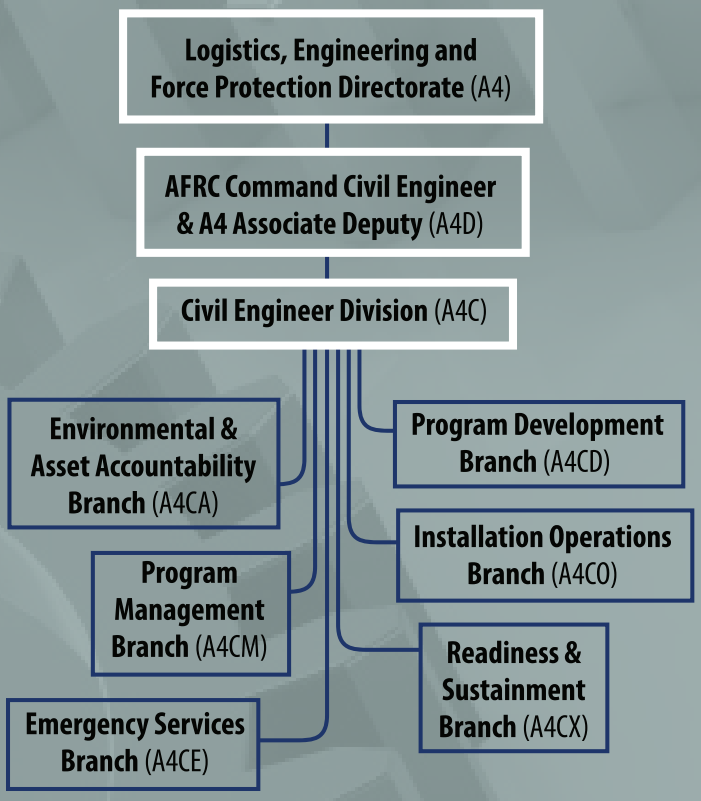
Air Force Reserve civil engineers directly support combat-ready forces by providing basing structure, emergency management, explosive ordnance disposal (EOD) and fire and emergency services for 69,200 citizen Airmen worldwide. Air Force Reserve Command's (AFRC) civil engineer is responsible for the acquisition, operation, maintenance and repair of a $7.5 billion physical plant, including 13 million square yards of airfield pavements and 13 million square feet of building floor space located at nine host and 57 tenant installations and ranges. Moreover, AFRC organizes, trains, equips and prepares more than 5,000 civil engineers in 44 units for worldwide contingencies.

SIGNIFICANT ACCOMPLISHMENTS

- Accumulated over 10,000 total training hours in war skills tasks through Exercise Patriot Warrior, engaging over 250 civil engineers from 18 squadrons.
- Provided EOD personnel who supported 97 Defense Support to Civil Agencies' missions including 52 very important person protective support assistance missions. Ranged from suspect packages, vehicles and devices to collections of military war souvenirs and support of the U.S. and North Korea Summit.
- Conducted resources, operations, deployments, education and training - management action plan visits to provide headquarters support to CE units 18-24 months prior to deployment tasking date. Identified gaps in education, training and equipment, provided best practices from other units after action reports and educated unit on deployment process.
- Established a rigorous EOD mission qualification training (MQT) program, designed to expedite the training process of EOD Airmen and training. The 460-day program incorporates 168 core career field education and training plan tasks and 30 non-core tasks required to operate in deployed and in-garrison locations as a fully qualified team member. Program reduced upgrade training time from about five years to just over two years from recruitment. As of July 16, 2018, 13 Airmen have entered the MQT program.
- Partnered with the Society of American Military Engineers and six high schools to sponsor the first inaugural Science, Technology, Engineering, Arts and Mathematics (STEAM) Challenge at Robins Air Force Base Museum of Aviation in Georgia. The challenge allowed 26 students to enhance their knowledge base in STEAM and inspire them to pursue Air Force careers in those fields.
- A total of 484 civil engineers mobilized to seven central command locations and executed combatant commander and Air Expeditionary Force requirements.
- Deployed over 260 engineers for training to Edwards Air Force Base, California, Nellis Air Force Base, Nevada, and Kunsan Air Force Base, South Korea, in response to major command call letters. Airmen smoothly integrated with their respective active duty shops and obtained valuable hands on experience, upgraded training and wartime skills. Reserve Airmen assisted with a backlog of work orders and small projects by working alongside active-duty counterparts and civilian contractors throughout the bases.
- Planned, developed and awarded facility programs for several new and/or converting flying missions, including:
  - Bed-down efforts for the KC-46 at Seymour Johnson Air Force Base, North Carolina, a $76.4 million military construction (MILCON) program.
  - $124.6 million MILCON program for the conversion of the C-130 unit at Pittsburgh International Air Port Air Reserve Station, Pennsylvania, to C-17s.
  - $16.1 million facility sustainment, restoration and modernization construction at Niagara Falls Air Reserve Station, New York, for conversion of its C-130 unit to KC-135 tankers.
  - Conversion of Naval Air Station Fort Worth Joint Reserve Base, Texas, from F-16s to F-35s, which included a cost effective $37 million MILCON program.
- Exercised continued situational awareness on its $7.5 billion facility plant through the Facility Operations, Capabilities and Utilization Survey (FOCUS). FOCUS ascertains conditions of facility systems conditions, populates



and updates BUILDER sustainment management system and measures facility space use and occupancy deficiencies. FOCUS assessed 5.5 million square feet of space at seven installations in FY18.



2018 statistics

Number of major bases:	10
Plant Replacement Value:	$7.5B
Buildings:	12,767,682 sq. ft.
Airfield Pavement:	12,817,074 sq. yd.
Housing:	N/A
Dorms:	N/A

AFRC personnel

Traditional Reserve	45,089
Air Reserve technicians	10,303
Active Guard and Reserve	2,755
Individual mobilization augmentees	8,088
Active duty	177
Civilian	3,765

CE personnel

Traditional Reserve	4,582
Air Reserve technicians	140
Active Guard Reserve	110
Individual mobilization augmentees	639
Active dute	5
Civilian	682

ANG

Joint Base Andrews Naval Facility, Maryland
usaf.jbanafw.ngb-a4.mbx.ngb-a4-front-office@mail.mil
Commercial: 240-612-8060
DSN: 612-8060

Col Scott Chambers
ANG Lead Engineer

COMMAND MISSION

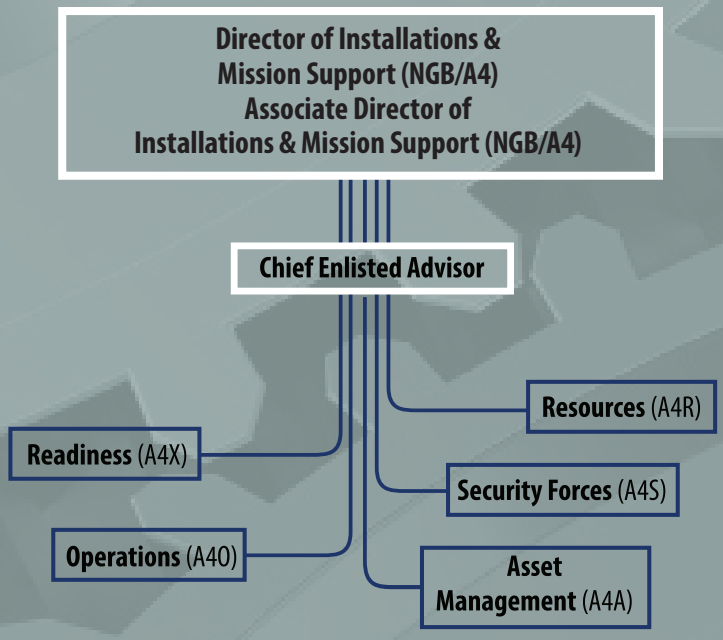
The Air National Guard Readiness Center develops, manages and directs ANG programs that implement national-level policies set by the Department of Defense, the Air Force and the National Guard Bureau. It also performs operational and technical functions to ensure combat readiness of ANG units and is a channel of communications between the NGB and the states of ANG operational activities.

CE RESPONSIBILITIES

Engineers in ANG A4 Installations and Mission Support Directorate oversee planning, programming, policy and financial oversight for the command's civil engineering programs: fire protection, explosive ordnance disposal (EOD), emergency management operations, manpower, technical support, maintenance, repair, energy programs, military construction (MILCON), environmental programs, infrastructure, asset management, real property, and facilities sustainment, restoration and modernization (SRM).

SIGNIFICANT ACCOMPLISHMENTS

- Executed over $360.1 million of critical SRM projects to repair and maintain ANG installations.
- Five large projects exceeding SRM programmed amount of $7.0 million for hangar upgrades approved through the Secretary of the Air Force for Congressional notification.
- Bedding down a KC-46 weapon system at one location, a F-35 weapon system at another location, while preparing a third location to receive C-17s.
- Supported Hurricane Maria relief efforts in Puerto Rico and the Virgin Islands. Deployed eight disaster relief bed-own sets, prime power and 140 PAX.



2018 statistics

Major bases	79
Plant replacement value	$19B
Buildings	44.5M sq. ft.
Airfield pavement	14.8M sq. yd.

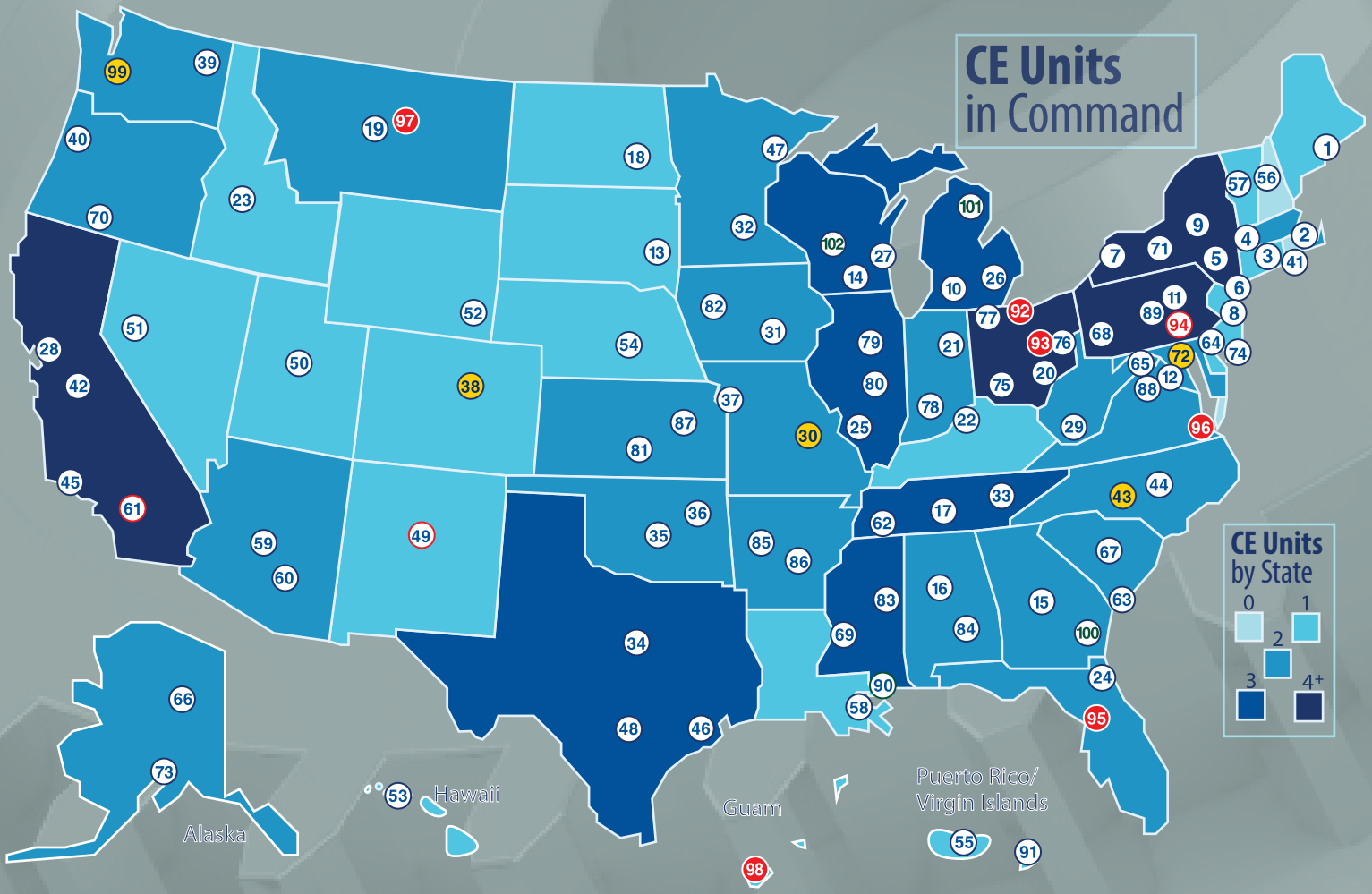
ANG personnel

Active Guard Reserve	14,921
Drill-status Guard	93,185
Dual-status technicians	29,297
Civilian	815

CE personnel

Active Guard Reserve	441
Drill-status Guard	8,177
Dual-status technicians	499
Civilian	238
State support staff	2,771

MILCON	12 projects/$133.7M
SRM	124 projects/$192.6M
Facilities operations	$248.4M



1 101 CES
Bangor ANGB, Maine
2 102 CES
Otis ANGB, Mass.
3 103 CES
Bradley IAP, Conn.
4 104 CES
Barnes ANGB, Mass.
5 105 CES
Stewart IAP, N.Y.
6 106 CES
Gabreski AP, N.Y.
7 107 CES
Niagara Falls, N.Y.
8 108 CES
JB McGuire-Dix-
Lakehurst, N.J.
9 109 CES
Schenectady County
AP, N.Y.
10 110 CES
W.K. Kellogg AP, Mich.
11 111 MSG
Horsham AGS, Pa.
12 113 CES
JB Andrews Naval Facility,
Washington, Md.
13 114 CES
Joe Foss Field, S.D.
14 115 CES
Truax Field, Wis.
15 116 CES
Robins AFB, Ga.
16 117 CES
Birmingham IAP, Ala.
17 118 CES
Nashville, Tenn.
18 119 CES
Hector Field, N.D.
18 119 RTS
Hector Field, N.D.
19 120 CES
Great Falls IAP, Mont.
20 121 CES
Columbus IAP, Ohio
21 122 CES
Ft. Wayne IAP, Ind.
22 123 CES
Louisville IAP, Ky.
23 124 CES
Gowen Field, Idaho
24 125 CES
Jacksonville IAP, Fla.
25 126 CES
Scott AFB, Ill.
26 127 CES
Selfridge ANGB, Mich.
27 128 CES
General Mitchell IAP, Wis.
28 129 CES
Moffett Federal
Air Field, Calif.
29 130 CES
Charleston ANGB, W.V.
30 131 CES
Lambert St. Louis
IAP, Mo.
31 132 CES
Des Moines IAP, Iowa
32 133 CES
Minneapolis-St. Paul
IAP, Minn.
33 134 CES
McGhee/Tyson AP, Tenn.
34 136 CES
Ft. Worth, Texas
35 137 CES
Oklahoma City, Okla.
36 138 CES
Tulsa, Okla.
37 139 CES
St. Joseph, Mo.
38 140 CES
Buckley AFB, Colo.
39 141 CES
Fairchild AFB, Wash.
40 142 CES
Portland IAP, Ore.
41 143 CES
Quonset State AP, R.I.
42 144 CES
Fresno IAP, Calif.
43 145 CES
Charlotte IAP, N.C.
44 145 RTS
Stanley County, N.C.
45 146 CES
Channel Islands
AGS, Calif.
46 147 CES
Ellington Field JRB,
Texas
47 148 CES
Duluth IAP, Minn.
48 149 CES
JB San Antonio -
Lackland, Texas
49 150 CES
Kirtland AFB, N.M.
50 151 CES
Salt Lake City
IAP, Utah
51 152 CES
Reno IAP, Nev.
52 153 CES
Cheyenne MAP, Wyo.
53 154 CES
JB Pearl Harbor-
Hickam, Hawaii
54 155 CES
Lincoln, Neb.
55 156 CES
Luis Muñiz Marin
IAP, P.R.
56 157 CES
Pease AGS Portsmouth
IAP, N.H.
57 158 CES
Burlington IAP, Vt.
58 159 CES
NAS New Orleans, La.
59 161 CES
Phoenix Sky Harbor
IAP, Ariz.
60 162 CES
Tucson IAP, Ariz.
61 163 CES
March ARB, Calif.
61 163 RTS
March ARB, Calif.
62 164 CES
Memphis IAP, Tenn.
63 165 CES
Savannah/Hilton Head
IAP, Ga.
64 166 CES
New Castle County
ANGB, Del.
65 167 CES
Martinsburg, W.V.
66 168 MSG
Eielson AFB, Alaska
67 169 CES
McEntire Joint NGB, S.C.
68 171 CES
Pittsburgh IAP, Pa.
69 172 CES
Jackson IAP, Miss.
70 173 CES
Klamath Falls AP, Ore.
71 174 CES
Syracuse Hancock
IAP, N.Y.
72 175 CES
Martin State AP, Md.
73 176 CES
JB Elmendorf-Richardson,
Alaska
74 177 CES
Atlantic City IAP, N.J.
75 178 CES
Springfield-Beckley
MAP, Ohio
76 179 CES
Mansfield Lahm RAP, Ohio
77 180 CES
Toledo Express AP, Ohio
78 181 CES
Terre Haute, Ind.
79 182 CES
Peoria IAP, Ill.
80 183 CES
Capitol AP, Ill.
81 184 CES
McConnell AFB, Kan.
82 185 CES
Sioux City AP, Iowa
83 186 CES
Key Field, Miss.
84 187 CES
Montgomery RAP, Ala.
85 188 CES
Fort Smith RAP, Ark.
85 188 RHTC
Fort Smith RAP, Ark.
86 189 CES
Little Rock AFB, Ark.
87 190 CES
Forbes AFB, Kan.
88 192 MSG
JB Langley-Eustis, Va.
89 193 SOCES
Harrisburg IAP, Pa.
90 209 CES
Gulfport, Miss.
91 285 CES
Christianhead, Virgin Islands
92 200 RHS
Port Clinton, Ohio
93 200 RHS Det 1
Mansfield, Ohio
94 201 RHS
Fort Indiantown Gap, Pa.
94 REOTS
Fort Indiantown Gap, Pa.
11 201 RHS Det 1
Horsham AGS, Pa.
95 202 RHS
Camp Blanding, Fla.
96 203 RHS
Virginia Beach, Va.
49 210 RHS
Kirtland AFB, N.M.
97 219 RHS
Malmstrom AFB, Mont.
98 254 RHS
Andersen AFB, Guam
30 231 CEF S-Team
Jefferson Barracks, Mo.
72 235 CEF S-Team
Martin State AP, Md.
38 240 CEF S-Team
Buckley AFB, Colo.
43 245 CEF S-Team
Charlotte IAP, N.C.
99 248 CEF S-Team
Camp Murray, Wash.
100 CRTC GA
Garden City, Ga.
101 CRTC MI
Alpena, Mich.
90 CRTC MS
Gulfport, Miss.
102 CRTC WI
Camp Douglas, Wis.

AFCEC

JB San Antonio-Lackland, Texas
AFCEC.WORKFLOW@US.AF.MIL
Commercial: 210-395-8000
DSN: 969-8000

Terry G. Edwards
Director

Col Matthew Benivegna
Deputy Director - San Antonio

Col Timothy Dodge
Deputy Director - Tyndall

MISSION

Enabling combat power at installations.

VISION

To lead the way in providing Civil Engineer expertise and solutions, enabling Airmen to excel so that missions prevail.

PRIMARY SUBORDINATE UNIT

CE Responsibilities

The Air Force Civil Engineer Center (AFCEC), headquartered at Joint Base San Antonio – Lackland, Texas, is a 1,900-person primary subordinate unit of the Air Force Installation and Mission Support Center (AFIMSC). AFCEC is responsible for providing responsive, flexible full-spectrum installation engineering services. AFCEC is the focal point for military construction and the sustainment, restoration and modernization of Air Force installations. AFCEC responsibilities include facility investment planning, design and construction, operations support, real property management, readiness, energy support and environmental compliance and restoration. The unit conducts its operations at 69 locations worldwide. AFCEC works closely with the Air Force Secretariat and Air Staff and AFIMSC directorates and detachments to provide effective, efficient engineering support to all Air Force and assigned joint installations.

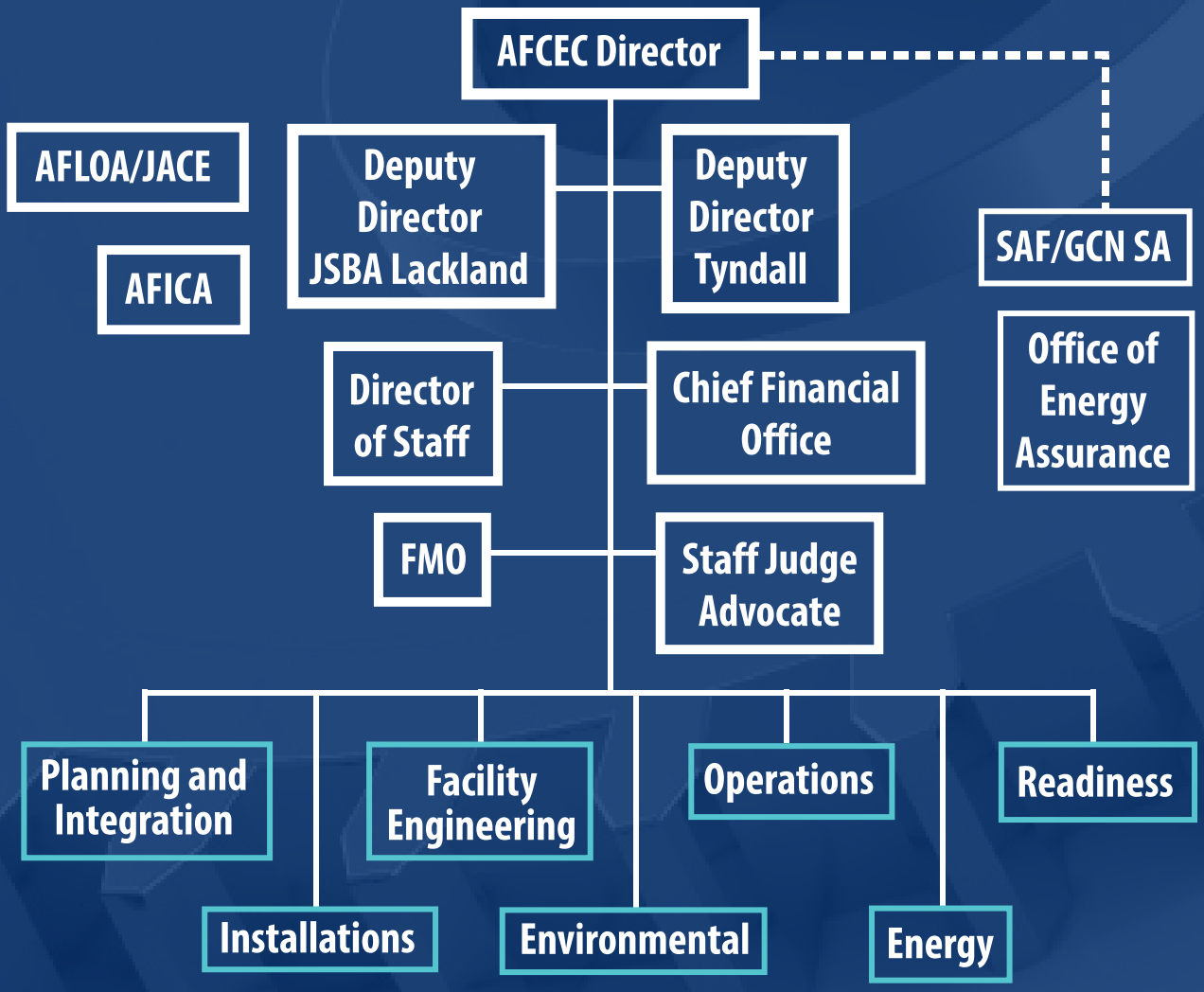
DIRECTORATES, CORE CAPABILITIES, REPRESENTATIVE ACCOMPLISHMENTS

The energy directorate's engineers, energy experts, contract officers and support staff work with installations and major commands to identify, evaluate and implement technologies and funding strategies to reduce Air Force energy consumption and costs to meet federal energy goals.

Facility Engineering (CF)

The facility engineering directorate provides centralized facility design and construction for military construction, restoration and modernization, sustainment and military family housing. The Air Force Comprehensive Asset Management Plan enables the center and installation civil engineers to improve project delivery by increasing lead times for planning and design, ensuring earlier and more effective construction awards.

- Completed the $233 million construction program for the KC-46A Main Operating Base #1 beddown at McConnell Air Force Base, Kansas, with the ribbon cutting in October 2017. This construction program consisted of 16 military construction (MILCON) projects including three hangars with a total of six aircraft bays, flight simulators fuselage maintenance trainers, parking apron and fuel hydrant point revisions, squad operations and various maintenance facilities. While originally approved for a total of $266 million, the program ultimately awarded for $233 million. Total construction for all 16 projects was completed in approximately three years.
- Completed $68 million of construction for the F-35 bed-downs at Hill AFB, Utah, Nellis AFB, Nevada, and Luke AFB, Arizona, to continue the operational, testing and training mission bed-downs, with another $72 million in construction awarded for the final construction phases of the beddowns.
- Executed design agent/construction agent responsibilities while managing a $58 million design program with 94 complex projects, and a $1.1 billion construction program with 54 multifaceted continental U.S.-executed projects. Example projects include full-depth runway replacements at Offutt AFB, Nebraska, Wright-Patterson AFB, Ohio, Little Rock AFB, Arkansas, and Hill AFB, and complete facility renovations at Vandenberg AFB, California, Joint Base San Antonio, Texas, Joint Base Andrews, Maryland, and Tinker AFB, Oklahoma.
- Served as the Air Force office of responsibility for the continued development and maintenance of facility and built infrastructure design and construction standards via the Unified Facilities Criteria Program, Air Force Corporate Facilities Standards and Installation Facilities Standards, which define a consistent, standardized and acceptable



level of quality for the approximately $2.5 billion annual worldwide Air Force construction programs.

- Awarded eight MILCON projects worth $318 million at Eielson AFB, Alaska, in support of the F-35A bed-down construction 26,450 square meters of new facility space and 3,325 linear meters of new utilities.
- Designed six military family housing projects in Japan worth $140 million, improving 250 living units and replacing 37,358 linear meters of housing utilities.
- Designed nine MILCON projects valued at $264 million for Air Force Special Operations Command at Yokota and Kadena air bases in Japan, constructing 26,163 square meters of new facility space and 122,682 square meters of new pavement.

Installations (CI):

The installations directorate provides real property, family housing, utilities privatization and Base Realignment and Closure (BRAC) enterprise-wide solutions in support of today's and tomorrow's Air Force missions, Airmen and their families. The directorate executes the Deputy Assistant Secretary of the Air Force for Installations' land and facilities policies through a full suite of services, including appraisals, lease renewals, licenses, easements, title opinions, environmental cleanup and transfer of property impacted by BRAC legislation and other support services.

- The Air Force BRAC program is closing in on the last six whole base transfers for legacy BRAC bases. To date, CI has transferred 97.5 percent of the 88,260-acre portfolios back to local communities, freeing up critical resources needed to restore readiness. Past mission activities continue to challenge the program with response to two emerging contaminants. Environmental cost-to-complete estimates and potential delays in property transfers have both increased as regulators work to learn more about these contaminants and the Air Force develops reasonable solutions. All Air Force BRAC sites potentially impacted by these contaminants are on track to complete initial site inspection fieldwork in FY18.
- Installations' real property management experts are helping the Air Force maximize SRM funding and achieve effective asset management by improving financial management operations at the base level. AFCEC's real property team conducted 128 installation site visits to prepare base-level real property offices for Department of Defense-wide financial audits. AFCEC began leading financial improvement audit readiness evaluations in FY14 to help Headquarters Air Force prepare for congressionally mandated auditability. The real property team nearly dou-

bled the number of site visits they conducted compared to FY16; they also reviewed more than 40,000 file folders, completed supporting documentation and ensured the specialized corrective actions plans they developed were in practice.

- The directorate's Expired Grant Program renewed 331 expired grants in FY17. Reducing the backlog of expired grants supports accurate record-keeping, audit readiness and directly impacts bases' SRM funding. The directorate processed 1,100 real estate transactions in FY17 and laid the ground work for several large-scale transactions scheduled for FY18. One of those transactions is a mission-critical 97-acre land acquisition to support a new National Geospatial-Intelligence Agency Operations Center in St. Louis, Missouri. The Air Force team — which consists of CI, the Air Force Office of General Counsel's Installations, Energy and Environmental Law Division, Air Force Legal Operations Agency and AFCEC's Environmental Directorate — negotiated with several city, state and federal agencies to draft a legal purchase and sale agreement that ensures environmental requirements are met and the title is delivered to the Air Force on schedule to support the $1 billion MILCON project.
- The compatible-use development team, responsible for the Readiness Environmental Protection Integration Program, secured a combined $30.5 million for encroachment protection across 12 installations in FY17. The team uses agreements with eligible entities, like cities and land trusts, to cost share mutually beneficial land easements within priority impact areas.
- At the close of FY17, the housing privatization portfolio had 55,319 units online, including 22,011 new and 12,485 renovated units. The Air Force's $619 million investment has resulted in $8.3 billion in development — translating to every Air Force dollar spent an additional $13 was invested through the private sector and government loans.

Energy (CN):

The energy directorate provides expertise to installations and major commands to identify, evaluate and help implement technologies and funding strategies to reduce Air Force energy consumption and costs to meet federal energy goals. The team actively works every opportunity to seek new, innovative paths that will take Air Force energy into tomorrow.

- Last fiscal year, the program development division awarded eight energy savings performance contracts worth over $330 million, covering buildings spanning more than 25 million square feet. These projects will meet infrastructure upgrade needs and provide savings at no upfront cost to the taxpayer. Currently working over 30 additional opportunities covering nearly 158 million square feet across more than 11,500 buildings.
- In FY17, the energy conservation focus (NRG) facilities sustainment, restoration and modernization program doubled its executed requirements from the previous year, and FY18's program is double that of 2017. The diverse projects include items such as boiler repairs, heating, ventilation and air conditioning and controls repairs, chiller repairs and lighting replacements. The growth in this program is directly related to efforts in programming initiatives to conserve energy and execution of those projects.
- To help warfighters better prepare for and recover from utility outages, the energy rates and renewables division is developing a sample master scenario event list for a long-term regional electrical grid outage that should be exercised in one or more of the installation's quarterly exercises.
- Provided our warfighters with diverse power sources. At Vandenberg AFB, a 28.2-megawatt photovoltaic array is fully operational, providing approximately 35 percent of the base's annual electricity usage and, more impressively, handling as much as 90 percent of the load during certain parts of the day.
- The measurements and analysis division is launching installation energy plan development this year by developing a standard statement of work and executing several task orders to jump start the enterprise-wide effort. These plans will provide mission priority of their areas of responsibility. Projects and initiatives will be identified,, and guidance provided, to get the enhancements into the integrated priority list (IPL). We'll also follow-up with recommended exercise injects to evaluate resiliency and provide information for further improvements.

Operations (CO):

Operations directorate professionals support base civil engineers by providing direct technical, managerial and training expertise. They provide operations support to develop and apply best management practices, mission-oriented training systems and facility/infrastructure standards to the Air Force CE community. Its members deliver expert technical guidance and consultation to AFCEC's customers worldwide to help civil engineers accomplish their mission better, faster and more cost effectively.

- The asset visibility team (AVT) visited 15 installations with the focus on operationalizing asset management (AM) through training base personnel in AM applications; calibrating and standardizing base efforts across the CE enterprise via advanced BUILDER/PAVER/utilities and asset management training; and validating the base's collected built infrastructure data and project requirements and scope.
- The AVT applied asset management principles during the IPL project validation process to projects over $5 million to reduce lifecycle costs where applicable. The team used sustainment management data collected to ensure the right requirements captured in projects at the right time. Their efforts helped reduce project costs by over $250 million, enabling resources to reallocate to other priority projects.
- The airfield pavement evaluation team conducted evaluations at 27 installations, to include structural, friction, surface condition and anchor proof-load testing of DoD installations in the U.S., Air Forces Central Command and South Korea. Executed 39 contract pavement condition index surveys for Air Force installation airfields, roads and parking.
- The Civil Engineer Maintenance, Inspection and Repair Team (CEMIRT) operating out of Travis AFB, California, and Tyndall AFB, Florida, completed 804 work requests in FY18 providing mission sustainment support at 75 bases. CEMIRT provides Air Force-wide specialized maintenance, installation and repair support on electrical distribution and power generation systems; aircraft arresting systems; facility related control systems; and HVAC.
- At the request of the U.S. Department of Homeland Security's Federal Emergency Management Agency and Travis AFB, California, CEMIRT responded to and provided generator support for areas impacted by the Atlas Wild Fire in Northern California October 10-17, 2017. CEMIRT specialists from Travis AFB provided electrical power to the Green

Valley Water Treatment Plant by deploying, installing and monitoring two 1.2-megawatt generators to sustain continuous power to the plant following continuous commercial power losses on October 10. The team ensured a continuous source of power to the only drinking water source for California's Napa Valley.
- CEMIRT provided generator support to the 156th Airlift Wing and Muniz Air National Guard Base, Puerto Rico, following the devastating aftermath of Category 5 Hurricane Maria. Four CEMIRT military specialists from Tyndall AFB traveled to Puerto Rico via C-130 transport and connected six generators to critical mission support facilities.

Planning & Integration (CP):

The planning and integration directorate provides a comprehensive framework to enable strategic and long-term planning for installation complexes to support the Air Force and its customers at the combined, joint, major command and installation levels through development of investment strategies.

- Deployed the visible asset sustainment tool (VAST) enterprise-wide. VAST assists requirements and operations personnel with using their text messaging data to develop lowest lifecycle sustainment plans for facilities and their components on the installation.
- Aligned Air Force Comprehensive Asset Management Plan (AFCAMP) scoring methodologies to target lowest lifecycle cost and Air Force strategy. Extended AFCAMP IPL horizon to four years and favored projects through a planning charrette and design to enhance their "executability."
- Developed infrastructure investment framework targeting facilities FSRM deferred maintenance and lifecycle repair backlog. The framework and supporting analysis laid the foundation for the Air Force Infrastructure Reset…Road to $24 billion initiative, investing at the lowest lifecycle, right-size installations, and provide planning and programming support to ready requirements for execution.
- Began migration of legacy geobase programs to a centralized Air Force program delivering the same level of service saving $20 million through efficiencies.
- Led all federal agencies in the development and implementation of Category Management, Category 4, Facilities and Construction. Cited by the Office of Secretary of Defense as the model category management program and used as the example for all other DoD components to replicate.
- Developed and orchestrated the transition from a dedicated Air Force assistance and advisory services contract vehicle to General Services Administration One Acquisition Solution for Integrated Services contract. Over 50 task orders valued at over $500 million will be awarded without experiencing any gaps in service at AFCEC.
- Provided key contract support and capacity to base contracting offices and civil engineer squadrons via decentralized ordering on AFCEC architectural and engineering indefinite delivery/indefinite quantity contracts. Over $80 million of task orders awarded by installations using the existing Air Force enterprise contract vehicle, eliminating redundant acquisition processes.

Readiness (CX):

The mission of the readiness directorate is to provide readiness and emergency services support to the Air Force CE community through technical information and standardized methodology, enabling civil engineers worldwide to execute their expeditionary combat support and emergency services missions safely, effectively and efficiently.

- As part of modernizing airbase resiliency capabilities, CX developed and fielded both equipment and tactics to modernize airfield pavement repair, to include a focused round of training classes through the Silver Flag site. Prototypes developed were for expeditionary hardened shelters and expeditionary repair kits for water/fuel systems. Additional technologies are in development.
- CX stood up CE's first operational flying program (outside research and development) with trained engineers operating quadcopters to survey the airfield after an incident. An initial capability fielded to several outside continental U.S. locations, and the technology is being further developed for additional efficiency and effectiveness. The legacy assessment method is personnel driving survey routes making this new method faster and safer.
- The CE Research Lab developed and submitted a patent for a method of preparing concrete, with properties tailored for different applications, using only a relatively small quantity of commercial product mixed into locally sourced dirt and aggregate. Specific "recipes" tested for specific applications, such as K-Fill for airfield crater repair, and if successful can reduce by 75 percent the logistics tail of shipping/lifting repair materials to OCONUS locations.
- Established Robotic Logistic Support Center at Tyndall AFB, to implement an intermediate-level robotics repair capability for Air Force explosive ordnance disposal. Obtained $1.8 million of robot parts; reduced down-time from over six months to two weeks to significantly increase operational readiness.
- Procured 175 Eco-Logic foam testing carts and retrofitted more than 900aircraft rescue fire fighting (ARFF) vehicles across the Air Force enterprise. This will allow Air Force fire departments to accomplish required annual ARFF vehicle testing in accordance with National Fire Protection Association standards without discharging foam into the environment.
- Ensured the Air Force has a single, integrated "all-hazards" program effectively and efficiently protecting Air Force community and mission capability; leveraging joint, interagency and civilian capacity as necessary while ensuring continued operational capability.
- Validated over 44,000 Air Force-wide munitions requirements. Analyzed munitions inventory and future requirements, developed a $31 million, five-year defense plan budget. Met inventory objectives for 19 Air Force demolition functional communities, ensured training, mobility and operational mission requirements are 100 percent supported.

Environmental (CZ):

The environmental directorate is responsible for enabling the Air Force mission through proper environmental planning, sound stewardship and strict compliance with federal laws. The directorate is responsible for managing Air Force restoration, compliance, sustainability and National Environmental Policy Act programs. Directorate personnel also provide environmental technical assistance and advice to Air Force installations, major commands and other clients.

- Environmental cleanup managed the execution of more than $371 million in restoration projects and activities to restore contaminated land, surface water and groundwater impacted by past Air Force activities. Site closeout achieved at 225 sites on 45 installations, with unlimited future use and no additional long-term management

requirements. The program also returned 58,056 acres to mission use through the Military Munitions Response Program.

- Air Force efforts continue in response to U.S. Environment Protection Agency's release of a lifetime health advisory of 70 parts per trillion (ppt) for perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) in drinking water. The Air Force's focus has been on ensuring that any PFOS/PFOA-contaminated drinking water at or above the 70 ppt level caused by past Air Force actions has been mitigated. Six installations with PFOS/PFOA detected in on-base drinking water have mitigation efforts, such astreatment systems, in place and operational. There are 22 installations with PFOS/PFOA detected in off-base drinking water that have mitigation efforts in place or underway. Initial assessments of the PFOS/PFOA issue are 99.5 percent complete and follow onsite inspections are 21 percent complete with a goal of 100 percent completion by the end of 2019.
- AFCEC actively supports Air Force mission access to ranges and facilities through ensuring enterprise compliance with Endangered Species Act requirements and supporting invasive species control. AFCEC continues to support invasive species control at Wake Atoll National Wildlife Refuge, Wake Island. Rats on the island, known to chew on the arrestor cables of aircraft, pose a severe safety hazard. Thus, in addition to ecosystem restoration, this invasive plant control ultimately assists with future rat eradication efforts and enhances flight safety.
- The Air Force Wildland Fire Branch (AFWFB) entered into interagency agreements and cooperative agreements with U.S. Fish and Wildlife Service, the Bureau of Land Management, Colorado State University and the University of Montana to provide wildland fire support to Air Force installations and ranges. The AFWFB executes prescribed fires over 100,000 acres and responds to over 100 wildfires annually to protect threatened and endangered species, reduce the wildfire risk and protect the Air Force mission. Program standup continued in 2018 with the addition of wildland support modules at Vandenberg AFB, Mountain Home AFB, Idaho, Joint Base McGuire-Dix-Lakehurst, New Jersey, and Kirtland AFB, New Mexico.
- Completed a supplemental environmental impact statement (SEIS) in just seven months in support of the F-35 operational beddown Pacific basing action at Eielson AFB, Alaska. The SEIS analyzed the impacts of providing additional storm water runoff control, equipment laydown areas and heat, water and power to the South Loop on the base. The Secretary of the Air Force signed the record of decision in December 2017, allowing approximately $400 million in construction projects to commence in support of the F-35 mission.
- AFCEC managed Air Force conservation revenue collections for FY17 totaling $4,197,856 ($1,029,378 for hunting, fishing and other outdoor recreation; $2,253,159 for forest product sales; $504,607 for agricultural leases). These funds support natural resources improvement projects, program administration and management costs, and agriculture management activities to implement the Integrated Natural Resources Management Plan.

2018 statistics

AFCEC personnel

Active duty	123
Reserve	22
Civilian	1,179
MILCON	488 projects/$11.81B
SRM	1,140 projects/$1.2B

Director of Staff/Functional Mission Systems & Business Program Office (FMO):

The director of staff manages and oversees mission support activities for the center to include workflow, strategic engagement and strategic planning and initiatives. The FMO interprets policy and provides guidance on information technology (IT) solutions to support the functional mission systems and business programs. The FMO is the interface between the CE functional community and the IT execution community. It supports the IT execution community by ensuring all functional requirements are well-defined, support mission and business needs, and advocate for approval and implementation.

USAFA

Colorado Springs, Colorado

USAFA_A7.ORG@USAFA.EDU
Commercial: 719-333-8718
DSN: 333-8718

Department of Civil Engineering
john.christ@usafa.edu
Commercial: 719-333-9194
DSN: 333-9194

Carlos Cruz-Gonzalez
Director of Installations

Lt Col Joel Sloan
Head, Department of Civil and Environmental Engineering

MISSION

The essential and enduring mission of the U.S. Air Force Academy is "to educate, train and inspire men and women to become officers of character motivated to lead the United States Air Force in service to our nation." The Officer Development System provides all members of the Academy constituency a framework and set of strategies to accomplish this mission. Within that system, the Academy executes a single integrated course of instruction in which cadets receive an accredited bachelor of science degree and an intensive program of physical education to develop enduring leadership competencies through military development.

CE RESPONSIBILITIES

Air Force civil engineers develop future leaders through instruction, mentoring and the provision of world-class infrastructure and facilities. The Department of Civil and Environmental Engineering has responsibility for one accredited major, civil engineering. Graduates receive civil or environmental engineering bachelors of science degrees and go on to meet mission needs as rated officers or engineers. The directorate of installations prioritizes, advocates and coordinates reachback support for Air Force facility requirements. The 10th Civil Engineer Squadron provides fire and emergency services while operating, sustaining and modernizing infrastructure and facilities on USAFA.

SIGNIFICANT ACCOMPLISHMENTS

CEN

- Completion of $6.1 million front gates force protection/gate canopies construction.
- Completion of $7.4 million Golf Course Clubhouse construction. A $8.2 million total nonappropriated fund investment with furniture, fixtures and equipment.
- Completion of privately funded $7.2 million home team locker room renovation.
- Completion of $730,000 Falcon Stadium turf replacement.
- A $2.5 million planetarium renovation into a Science, Technology, Engineering and Math research facility is 94 percent complete with an estimated completion date of September 2018.
- A budgeted $15 million tri-intersection bridge repair is 57 percent complete with an estimated completion date of June 2019.
- Completed planning and request for proposal development for new $30 million CyberWorx facility. Estimated contract award is January 2019 with an estimated completion date of October 2021.
- Initiated major update to USAFA Installation Development Plan which is 90 percent complete.
- Initiated update to USAFA design standards to meet new Air Force installation facility standards with an estimated completion date of April 2019.
- Received $3 million in funding through the Office of the Secretary of Defense's Readiness and Environmental Protection Integration program.
- Collaborated with 30 representatives from 19 American Indian tribes at the second annual Front-Range Tribal Relations Meeting.

CEO

- Initiated re-solicitation effort on $100-250 million CE base maintenance contract while continuing quality assurance efforts for the existing contract.

2018 statistics

CE personnel

HQ USAFA/A4	
Civilian	3
HQ USAFA/DFCW	
Active duty	20
Reserve	4
Civilian	6
10 CES	
Active duty	28
Civilian	86
Contractor	563

Total CES organization personnel (AD, Reserve, Guard, Civilian, Contractor, Other)	563
CES Personnel (AD, Civilian)	114

MILCON	1 project, $6M
SRM	46 projects/$114.8M
Facility operations	$183.8M

AFIT

The Civil Engineer School

At The Air Force Institute of Technology

Wright-Patterson AFB, Ohio
CESS@AFIT.EDU
Commercial: 937-255-5654
DSN: 785-5654

MISSION

Develop agile, innovative and ready engineers by providing vital, relevant and connected professional continuing education and consultation services in support of US Air Force and joint engineer operations. Our vision is to ensure every Civil Engineer Airman is educated through a Continuum of Learning to confidently and expertly integrate engineer capabilities for mission success and to be recognized as a defense leaders in delivering joint engineer education.

Col Donald R. Ohlemacher
Dean

Jared Astin, Ph.D.
Associate Dean

REPRESENTATIVE ACCOMPLISHMENTS

The Civil Engineer School educated more than 10,400 Air Force and joint service civil and environmental engineers through 163 course offerings and other educational opportunities during FY2018. To maximize flexibility and accommodate student schedules, these courses were offered via traditional in-residence and on-site settings, as well through advanced distance-learning methods including online, satellite, web streaming and video-on-demand. In mid-2017, the school assumed the role of executive agent for the Air Technology Network (ATN) Program Management Office, responsible for providing interactive TV, HD streaming, and audioconferencing for DoD-wide distance learning. This merger allowed The Civil Engineer School to capitalize on the expertise of ATN broadcast engineers to improve the functionality and configuration of the Distance Learning studio. Highlights from this year include:

Vital

- Graduated and awarded the CE Occupational Badge to 156 new Active-Duty, Guard, and Reserve officers and 14 civilians from the WMGT 101, AF Civil Engineer Basic Course.
- Served as the Air Force senior facilitator for five joint engineer operations courses, certifying 49 Air Force civil engineers and 300+ joint engineers for Joint Task Force operations.
- Delivered newly-developed cost-estimating courses (WENG 200, 400, & 500) to 479 civil engineers via 17 on-site and satellite offerings (7 OCONUS/3 CONUS/7 satellite).
- Re-designed asset management curriculum. Introduced new Air Force Civil Engineer Basic course and Introduction to Asset Management for new engineers and overhauled 60 hours of instruction for base level asset managers.
- Facilitated over 199K hours of student distance learning through the Air Technology network: 129K hours for DOD & VA medical training, 55K hours for The Civil Engineer School, and the rest for other AF schools.
- Educated over 3,100 students via the distance learning program; provided 21 satellite offerings and 61 web-based offerings and averaged 45 video-teleconferences per month.
- Conducted nine critical Inter-Service Environmental Education Review Board-approved course offerings with 204 joint attendees.
- Directed DoD's only distant learning HVAC Control Systems course; executed three offerings for 158 students on topics including fundamentals, control strategies, and advanced technology.

Relevant

- Provided 20 course offerings to 732 key civil engineer leaders, ranging from CE squadron commander/deputy and CE squadron superintendent, through engineering, Explosive Ordnance Disposal, installation management and operations flight commanders.
- Partnered with the Air Force Civil Engineer Center subject matter experts to deliver 11 events of the Environmental Speaker Series, to over 5,000 members either live or post-viewed audience.
- Championed CMSAF initiative to include Airman Dorm Leaders (ADL) in the Developmental Special Duty program. Built and executed new multi-modal Unaccompanied Housing Leadership course for over 70 newly-selected ADLs.
- Directed 3-day WMSS 700, Senior Civil Engineer Officer Seminar, focused on strategic engineering topics. 11 CE colonel-selects and 16 Colonel/General Officer guest instructors participated in the second annual offering.
- Created 30 web-based, interactive environmental micro-lessons for AFCEC The Environmental Awareness Course Hub (TEACH), averaging over 1,000 views per month.
- Sustained AFIT's Professional Engineer (PE) Review Course, which provided 30 hours of proctored material to help prepare 69 joint service engineers for the rigorous PE exam.
- Developed a competency-based learning framework under AETC's Continuum of Learning, and at the request of the AETC Command Chief, showcased education innovations at the Air Force Career Field Manager Workshop.

Connected

- Provided 308 hours of timely and responsive consultation services to engineers around the world on issues pertaining to management, engineering, and environmental subject areas.
- Analyzed a foreign country's airfields and incorporated findings into a National Air and Space Intel Center intelligence report. The Space Defense Program will use the report for future indications of mobilization and system development.
- Incorporated first-ever Facilities Management curriculum block into the 3E6 apprenticeship and career development course. Provided curriculum and material template to expand to all CE 3-level courses.
- Delivered just-in-time Airfield Pavement Construction Inspection course to AFCENT/AFCEC construction managers at four Southwest Asia installations supporting $628M CENTCOM airfield pavement program.
- Provided on-site asset management education to two USAFE bases, delivering in-person instruction and consultation to over 85 engineers.
- Supported RED HORSE planning and design at AB201 in Niger, with just-in-time analysis of electrical beddown plan. Rectified power generation capability shortfall and identified opportunities for future expansion.
- Hosted second annual AFCEC Operations Flight Workshop. Brought together over 150 Operations leaders from across the CE enterprise to discuss best practices new initiatives aimed at improving performance.

CONTACT EMAIL ADDRESS: TCESCourseManagers@afit.edu

2017 Civil Engineer Awards

Air Force Emergency Manager of the Year (Civilian Emergency Manager)

Winner: Mr. James D. Morton, 366 CES, Mountain Home AFB, ID (ACC)
Runner up: Mr. Robert Cronan Jr., 28 CES, Ellsworth AFB, SD (AFGSC)

Air Force Emergency Manager of the Year (Military Emergency Manager)

Winner: MSgt Nathan Hargrafen, 786 CES, Ramstein AB, Germany (USAFE-AFAFRICA)
Runner up: TSgt Shellie L. Vincent, 778 CES, Robins AFB, GA (AFMC)

Air Force Outstanding Civil Engineer Manager of the Year Award (Civilian Manager)

Winner: Mr. Tae Kang, 51 CES, Osan AB, Korea (PACAF)
Runner up: Ms. Jessica J. Elsik, 27 SOCES, Cannon AFB, NM (AFSOC)

Air Force Outstanding Civil Engineer Manager of the Year Award (Civilian Supervisor)

Winner: Mr. Brandon C. Elson, 460 CES, Buckley AFB, CO (AFSPC)
Runner up: Mr. Phil L. Bunning, 48 CES, RAF Lakenheath, UK (USAFE-AFAFRICA)

Air Force Outstanding Civil Engineer Manager of the Year Award (Civilian Technician)

Winner: Mr. Joseph J. Bruno, 4 CES, Seymour Johnson AFB, NC (ACC)
Runner up: Mr. Matthew A. McKee, 97 CES, Altus AFB, OK (AETC)

Air Force Outstanding Civil Engineer Unit Award (Active Duty Large Unit)

Winner: 96 CEG, Eglin AFB, FL (AFMC)
Runner up: 52 CES, Spangdahlem AB, Germany (USAFE-AFAFRICA)

Air Force Outstanding Civil Engineer Unit Award (Active Duty Small Unit)

Winner: 14 CES, Columbus AFB, MS (AETC)
Runner up: 66 ABG/CE, Hanscom AFB, MA (AFMC)

Air Force Outstanding Civil Engineer Unit Award (Air Reserve Component Unit)

Winner: 172 CES, Jackson ANGB, MS (ANG)
Runner up: 419 CES, Hill AFB, UT (AFRC)

Balchen-Post Award

Winner: 773 CES, JB Elmendorf-Richardson, AK (PACAF)
Runner up: 10 CES, USAF Academy, CO (USAFA)

Brigadier General Archie S. Mayes Award

Winner: 354 CES, Eielson AFB, AK (PACAF)
Runner up: 97 CES, Altus AFB, OK (AETC)

Brigadier General Michael A. McAuliffe Housing Excellence Award

Winner: 48 CES, RAF Lakenheath, UK (USAFE-AFAFRICA)
Runner up: 1 SOCES, Hurlburt Field, FL (AFSOC)

Chief Master Sergeant Larry R. Daniels Award

Winner: SMSgt Alva R. Benjamin, 374 CES, Yokota AB, Japan (PACAF)
Runner up: MSgt Daniel C. Berner, 341 CES, Malmstrom AFB, MT (AFGSC)

Colonel Frederick J. Riemer Award

Winner: 18 CES, Kadena AB, Japan (PACAF)
Runner up: 87 CES, JB McGuire-Dix-Lakehurst, NJ (AMC)

Harry P. Rietman Award

Winner: Mr. John M. Thompson, 99 CES, Nellis AFB, NV (ACC)
Runner up: Ms. Jadee A. Purdy, 6 CES, MacDill AFB, FL (AMC)

Major General Clifton D. Wright Award

Winner: 92 CES, Fairchild AFB, WA (AMC)
Runner up: 97 CES, Altus AFB, OK (AETC)

Major General Del R. Eulberg Award

Winner: 787 CES, JB McGuire-Dix-Lakehurst, NJ (AMC)
Runner up: 718 CES, Kadena AB, Japan (PACAF)

Major General Eugene A. Lupia Award (Airman)

Winner: SrA Nicholas A. Franklin, 647 CES, JB Pearl Harbor-Hickam, HI (PACAF)
Runner up: SrA Tyler A. Symoens, 21 CES, Peterson AFB, CO (AFSPC)

Major General Eugene A. Lupia Award (Company Grade Officer)

Winner: Capt Nathan L. Demers, 775 CES, Hill AFB, UT (AFMC)
Runner up: Capt Dustin L. Gooden, 375 CES, Scott AFB, IL (AMC)

Major General Eugene A. Lupia Award (NCO)

Winner: TSgt David L. Kressler, 4 CES, Seymour Johnson AFB, NC (ACC)
Runner up: TSgt Elizabeth A. Phelps, 423 MTS, JB McGuire-Dix-Lakehurst, NJ (AMC)

Major General Joseph A. Ahearn Enlisted Leadership Award

Winner: CMSgt John M. Tingle, 628 CES, Charleston AFB, SC (AMC)
Runner up: CMSgt Christopher Vansile, 52 CES, Spangdahlem AB, Germany (USAFE-AFAFRICA)

Major General L. Dean Fox Award

Winner: Maj Christopher L. Teke, 18 CES, Kadena AB, Japan (PACAF)
Runner up: Maj Peter S. Joo, 48 CES, RAF Lakenheath, UK (USAFE-AFAFRICA)

Major General Robert C. Thompson Resource Excellence Award

Winner: 8 CES, Kunsan AB, Korea (PACAF)
Runner up: 86 CEG, Ramstein AB, Germany (USAFE-AFAFRICA)

Major General William D. Gilbert Award (Officer)

Winner: Lt Col Ryan G. Walinski, 786 CES, Ramstein AB, Germany (USAFE-AFAFRICA)
Runner up: Capt Marie T. Harnly, 627 CES, JB Lewis-McChord, WA (AMC)

Major General William D. Gilbert Award (Civilian)

Winner: Ms. Barbara J. George, HQ AFIMSC, JB San Antonio, TX (AFMC)
Runner up: Mr. Jayson A. Ilic, HQ USAFE-AFAFRICA, Ramstein AB, Germany (USAFE-AFAFRICA)

Major General William D. Gilbert Award (Enlisted)

Winner: MSgt Elizabeth C. Butler, AFCEC, Tyndall AFB, FL (AFMC)
Runner up: SMSgt Joseph D. Towne, HQ PACAF, JB Pearl Harbor-Hickam, HI (PACAF)

MasterBlaster Association EOD MasterBlaster of the Year Award

Winner: SMSgt Nicholas A. Schulte, AFIMSC, JB San Antonio, TX (AFMC)
Runner up: MSgt Ryan M. Bobzin, USAFCENT, Shaw AFB, SC (USCENTCOM)

National Society of Professional Engineers (NSPE) Federal Engineer of the Year Award (Civilian)

Winner: Mr. Rafid M. Kully, Altus AFB, OK (AETC)
Runner up: Mr. Ray N. Hansen, AFCEC, Tyndall AFB, FL (AFMC)

National Society of Professional Engineers (NSPE) Federal Engineer of the Year Award (Military)

Winner: Maj Steven J. Schuldt, 8 CES, Kunsan AB, Korea (PACAF)
Runner up: Maj Adam W. Burwinkle, AFIMSC Det 8, JB Langley-Eustis, VA (AFMC)
Honorable mention: Capt Garrett A. Karnowski, 1 SOCES, Hurlburt Field, FL (AFSOC)

Senior Master Sergeant Gerald J. Stryzak Award

Winner: 502 CES, JB San Antonio, TX (AETC)
Runner up: 325 CES, Tyndall AFB, FL (ACC)

Society of American Military Engineers (SAME) Goddard Medal

Winner: SMSgt Kenley E. Flemming, AFCEC, Tyndall AFB, FL (AFMC)
Runner up: MSgt David J. Lyons, 97 CES, Altus AFB, OK (AETC)

Society of American Military Engineers (SAME) Newman Medal

Winner: Col Eric S. Turner, AFIMSC, JB San Antonio, TX (AFMC)
Runner up: Col Brian S. Hartless, 86 CEG, Ramstein AB, Germany (USAFE-AFAFRICA)

The Major General Augustus M. Minton Award

Winner: Maj Josh Aldred, AFCEC, Tyndall AFB, FL (AFMC)
Runner up: 2Lt Peter M. Last, 633 CES, JB Langley-Eustis, VA (ACC)

General Thomas D. White Environmental Award Cultural Resources Management - Large Installation

Winner: Eglin AFB, FL (AFMC)
Runner up: Vandenberg AFB, CA (AFSPC)

General Thomas D. White Environmental Award Environmental Quality - Non-Industrial Installation (CONUS)

Winner: Eglin AFB, FL (AFMC)
Runner up: Hurlburt AFB, FL (AFSOC)

General Thomas D. White Environmental Award Environmental Restoration - Installation

Winner: Vandenberg AFB, CA (AFSPC)
Runner up: Ramstein AB, Germany (USAFE-AFAFRICA)

General Thomas D. White Environmental Award Natural Resources Conservation - Small Installation

Winner: FE Warren AFB, WY (AFGSC)
Runner up: Hurlburt AFB, FL (AFSOC)

General Thomas D. White Environmental Award Environmental Quality - Individual/Team

Winner: Hurlburt AFB, FL (AFSOC)
Runner up: Yokota AB, Japan (PACAF)

General Thomas D. White Environmental Award Environmental Restoration - Individual/Team

Winner: Rebecca L. Hobbs, AFCEC Installation Support Section, Edwards AFB, CA (AFMC)
Runner up: Ramstein AB, Germany (USAFE-AFAFRICA)

General Thomas D. White Environmental Award Natural Resources Conservation - Individual/Team

Winner: AFCEC Installation Support Section, Travis AFB, CA (AFMC)
Runner Up: Patrick AFB, FL (AFSPC)

General Thomas D. White Environmental Award Weapon System Acquisition - Large Program

Winner: Combat Rescue Helicopter (AFMC)
Runner up: AFLCM, WPAFB, OH (AFMC)

General Thomas D. White Environmental Award National Environmental Policy Program

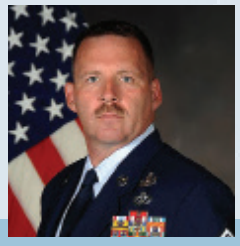
Winner: Patrick AFB, FL (AFSPC)
Runner up: AFLCM, WPAFB, OH (AFMC)

CE CHIEFS' COUNCIL

As members of the CE Council, the CE chief of enlisted matters (CEM), CE career field managers (CFMs), CE major command (MAJCOM) functional managers (MFMs), AFIMSC CE chiefs and AFIT CE Superintendent translate strategic vision into action through leadership, implementation and authoritative direction for human capital management through organization priorities, developing career-long education, training and enlisted development programs, and implementation of enterprise goals and initiatives through effective optimization and equipping of the enlisted force.

Chief Master Sgt. Randall Youngblood
Civil Engineer Career Field Manager

Chief Master Sgt. Timothy W. Rickard
Fire Emergency Services CFM



Chief Master Sgt. Douglas Moore
Explosive Ordnance Disposal CFM

Chief Master Sgt. Joseph Trenholm
Emergency Management CFM

Chief Master Sgt. Nathan Adams
AFCEC CO

Chief Master Sgt. Michael T. Irons
AFCEC CX

Chief Master Sgt. Jumaane Izzard
HQ AFIMSC CE CEM

CE MAJCOM Functional Managers

These functional managers, based at AFIMSC headquarters at JB San Antonio-Lackland, Texas, lead teams that are responsible for implementing policy and guidance for more than 40,000 civil engineer total force Airman assigned to all continental U.S. major commands; directing assigment actions for engineers at more than 300 worldwide operating locations; and working directly with field commanders and detachments directors on civil engineer manpower and personnel requirements. They also serve as representatives on Air Force Civil Engineer Chief Master Sergeant Council and various Air Force-level meetings on enlisted training, quality of life, morale and career development.

Chief Master Sgt.
Ronald Aickelin
AFRC

Chief Master Sgt.
Jeff Coles
ANG

Chief Master Sgt.
Steve Swingle
ACC & AFSPC, AFTAC

Chief Master Sgt.
Matt Sanders
AETC and AFIMSC
Training Cell

Chief Master Sgt.
Joel Jones
AMC, AFDW
and USAFE

Chief Master Sgt.
Gary Underwood
AFSOC, AFGSC
and All Others

Chief Master Sgt.
David Clifford
AFMC, AFIMSC
and PACAF

CE Officer Career Field Manager

Col. Michael J. Zuhlsdorf

The 32E Career Field Manager (CFM) provides day-to-day senior leader advocacy for the officers in our civil engineer community. Teaming with the 32E Officer Assignment Team (OAT) at Randolph AFB, and the Force Development Manager (FDM) at AFIT, the CFM as oversight responsibility of an officer's career development, education, and training; to include validation of advanced academic degrees and other professional continuing education. The 32E CFM also provides oversight of Total Force Assessment, works with the Career Progression Group, and supports civil engineer officer accessions. Finally, the CFM is a voting member of the 32E Development Team (DT).

CE Career Fi

CE Civilian Career Field Manager

Carol Gaudette

The Civilian Career Field Manager (CFM) addresses any recruitment, development, or retention concerns for CE Federal Wage System (FWS) and General Schedule (GS) personnel by implementing necessary policies, executing new force development initiatives, and revising education and training requirements. To maintain consistent development across the career field, the CFM oversees the Standard Core Personnel Documents (SCPD) and career progression paths. In addition, the CFM supports the Functional Manager (FM) in chairing the Development Team (DT) and Functional Advisory Council (FAC), which enables the CFM to guide the restructuring of positions, including coordination on career-broadening programs. Overall, the CFM ensures the CE civilian career field is an agile, innovative, ready workforce.

Civilian Development Team Member Responsibilities

Civilian Development Team (DT) members are responsible for overall policy and human capital strategies for the CE civilian career field, professional development, diversity and inclusion, and recruitment and retention of talent as directed by the career field Functional Manager (FM). Functional Advisory Council (FAC) members serve as part of the Civilian Intermediate Development Team (IDT) to encourage feedback, increase awareness of Civilian Developmental Education (CDE) and vectoring, and champion mentoring and career development opportunities for members of the CE civilian workforce. Additionally, DT members inform the scope and operations of the CE Career Field Team (CECFT) and develop and collect performance measures consistent with the vision and purpose of the CE FAC.

Civilian Development Team Representatives

Col Dee Jay Katzer
Chief, Civil Engineer Division
Organizational Rep: ACC (A4/A4C)
Also Represents: USCENTCOM; AFCENT; USSOUTHCOM; 25 AF; AFTAC; 557 Weather Wing

Ms. Suzanne Bilbrey
Director, Environmental Management
Organizational Rep: AFCEC (CZ)

Mr. Brian Lee, P.E.
Chief, Engineering Division
Organizational Rep: AFGSC (A47/A4C)
Also Represents: USSTRATCOM

Mr. Ronald Onderko, P.E.*
Command Senior Civil Engineer
Organizational Rep: AFMC (AFC)
Also Represents: AFTC; AFNWC; AFRL

Mr. Robert Staib
Chief, Civil Engineer Division
Organizational Rep: AFRC (A4C)

Mr. Thomas Wahl
Chief, AFSOC Installations Division
Organizational Rep: AFSOC
Also Represents: USSOCOM

eld Civilians

Ms. Michelle Linn
Chief, Civil Engineer Division
Organizational Rep: AFSPC (A4C)
Also Represents: 24 AF; NASIC

Mr. Martin Buncher
Chief, Civil Engineering Division
Organizational Rep: AMC (AFIMSC Det 9/CE)
Also Represents: USTRANSCOM; AFDW

Mr. Kevin Mattoch
Chief, Operations Division
Organizational Rep: NGB (A7E)
Also Represents: ANGRC; USNORTHCOM

Mr. John R Lohr
Chief Engineer, DET 2
Organizational Rep: PACAF (AFIMSC Det 2/CE)
Also Represents: USINDOPACOM

Col Anthony Higdon
Chief, Civil Engineer Division
Organizational Rep: USAFE (A47/A4CP)
Also Represents: EUCOM; USAFRICA

Ms. Brenda Roesch
Director, 502d Civil Engineer Squadron
Organizational Rep: AETC (502 CES/CL)
Also Represents: USAFA; AFIT; AFELM; AFNORTH

Mr. Keith Kellner
Branch Chief
Organizational Rep: AFIMSC (IZBB)
Also Represents: AFMSA; AFPA; AFSFC

Mr. Otis Hicks
Director, Environmental Policy and Programs
Organizational Rep: SAF (IEE)
Also Represents: HAF; AFIA; OSD; Defense Agencies; Joint Staff

Mr. David Perkins*
Director, 88th Civil Engineer Group
Represents: Wage Grade

**Serve as FAC panel chairs. These members work specific objectives, special issues, develop policy and provide recommendations to the CE FAC in context of the Air Force Strategic Master Plan on matters related to civilian career field requirements and in service to the CE civilian community.*

CE CAREER FIELD UPDATE

Chief Master Sgt. Larry L. Blume
Chief, Force Development Division
Air Force Civil Engineer Center

By Chief Master Sgt. Ed Vallejo
ARC Career Field Liaison

The Air Force Civil Engineer Center's (AFCEC) Force Development Division is responsible for the training development of approximately 28,000 total force civil engineer personnel in 10 Air Force specialty codes (AFSCs). Experts in each of the AFSCs, known as force development managers (FDMs), work with Air Force career field managers in the 3E000, 3E700, 3E800 and 3E900 specialties and the Air Reserve Component, as well as career field representatives at the major commands (MAJCOMs), Air Staff and Air Force Personnel Center.

FDMs develop career field education and training plans (CFETPs) and manage over 300 web-based courses on the Advanced Distributed Learning Service and the Civil Engineer Virtual Learning Center sites. They serve as enlisted subject matter experts within their respective specialty and advise total force engineers at all functional levels. As sole voting members for the Civil Engineer Chiefs Council, the MAJCOM functional managers (MFMs) sanction development of new CFETPs, initial skills and supplemental courses, and qualification training packages for multiple career fields. In partnership with various technical training vendors, we hosted specialized training for fire suppression and heating, ventilation and air conditioning (HVAC) technicians at zero cost to the unit. We are at the infant stages of this vendor training program and look forward to ramping it up in 2018. Additionally, our team explored credentialing opportunities for enlisted engineers beyond what the Air Force credentialing opportunity online (AF COOL) program has to offer; stayed tuned in 2018 as we publicize the many programs available to our Airmen. The following pages provide specific information regarding the current status of the enlisted civil engineer (CE) career fields. Points of contact are listed for each AFSC and they can be reached through AFCEC's Reachback Center (1-888-232-3721 or DSN 312-523-6995; AFCEC.RBC@us.af.mil). Up-to-date information and guidance for individual AFSCs can be found on the CE Force Development SharePoint site at https://cs3.eis.af.mil/sites/OO-ENCE-A6/24048/default.aspx.

In 2017, the focus for Guard and Reserve members was on five-level upgrade training. Each member will benefit if given the opportunity to concentrate on his or her training during their once-a-month drill weekend. The Air Force Reserve Command (AFRC) has started an upgrade training initiative to help new technical school graduate members in completing the majority of their required tasks. The mandatory requirement is for each graduate to attend training at the Expeditionary Combat Support Training and Certification Center (ECS-TCC) from the AFRC located in Dobbins Air Reserve Base, Georgia.

Upgrade training is currently offered for 3E0-3E6 AFSCs AFRC civil engineer Airmen. During the BETA year in fiscal 2017, approximately 100 personnel attended. The training Airmen received this past year was very successful. There are an estimated 200 personnel scheduled to attend in FY18. One of the many learning experiences Airmen will encounter as part of this initiative, and not part of the assigned core tasks, will be exercises and discussions with a focus on AFI 1-1, Air Force Standards and AFI 36-2618, The Enlisted Force Structure. Additionally, they will define and implement Air Force Policy Directive (AFPD) 1, Air Force Culture and AFPD 36-26, Total Force Development.

The care and feeding of each member is supported by the 622th Civil Engineer Group Force Support Silver Flag (FSSF) schoolhouse located adjacent to ECS-TCC. This will be their first exposure to a bare base or a deployed environment as they are lodged in a tent city. The site has full spectrum of morale, welfare and recreation (MWR): tent, shower/share latrines, gym and full kitchen and dining area.

More information can be found on ECS-TCC SharePoint: https://cs2.eis.af.mil/sites/10187/default.aspx

3E0X1 ELECTRICAL SYSTEMS

Electrical Systems technical training had another productive year in 2017. We successfully invested over $600,000 into the Civil Engineer Advanced Troubleshooting course. With this investment we added training on the latest technologies our Airmen are asked to maintain and repair on a daily basis. Some examples of the added curriculum include replacing and programing programmable logic controllers, replacing and programing variable frequency drives, troubleshooting advanced lighting systems and dual pump lift stations, and hands-on training on renewable energy trainers. The biggest driver behind this investment is the fact that many of these technologies are being designed into our deploying assets and, without this training, we become a weak link in our ability to survive and operate in a deployed environment.

Another area that received a lot of attention this year was something all electricians are exposed to at some point in their Air Force career, working from heights. It has been over six years since the last fear-of-heights assessment was conducted on an electrician and, as a result, we now have electricians peppered throughout the Air Force who possess a fear of heights. This is at no fault of the Airman, however, it is a recognized issue. The chiefs' council gave approval for assessments to be conducted at Sheppard Air Force Base, Texas, upon the trainees' arrival. Conducting the assessment upfront, before Airmen start their journey to become electricians, keeps the system fair and equitable. Beyond resource requirements of time and money, our goal is to identify the right career path for our Airmen upfront, to ensure their safety and mission success.

It has truly been a privilege and an honor to be the electrical systems specialist force development manager over the past three-and-a-half years.

Senior Master Sgt. Edmundo E. Perales
3E0X1 Force Development Manager

3E0X2 ELECTRICAL POWER PRODUCTION

In 2017 we were able to take a step into the future by procuring eight advanced medium mobile power system (AMMPS) generators for our training locations. The AMMPS are the next generation of mobile electric power generators and represent a leap forward in technology for medium power systems. As the AMMPS roll off the assembly line, they will phase out the tactical quite generators currently in the field. Training on these systems should start late spring at the 366th Training Squadron, Sheppard Air Force Base, Texas, and sometime early summer at our three Silver Flag training locations at Tyndall AFB, Florida, Northwest Field, Guam, and Ramstein Air Base, Germany. This will ensure power production Airmen are ready to operate and maintain these new systems.

After many years of waiting, the basic expeditionary airfield resources (BEAR) power unit (BPU) finally roared to life. Using knowledge gained at formal training, Silver Flag and mission essential equipment training, power production Airmen installed, and are currently operating, the world's first operational BPU plant. We would not have been able to accomplish this undertaking without the extraordinary efforts of our active duty, Guard and Reserve cadre that make up our total force training team. The lessons learned from the plant's installation and continued operation will be invaluable as we continually adapt our training.

During the summer the newest occupational survey was sent out to the field. In 2018 we will convene a specialty training requirements team where technical experts from each major command (MAJCOM) will come together to determine training needs of the Air Force specialty codes. They will use the data gathered from the survey to ensure that our training not only meets today's needs, but the technological and operational challenges that will be placed on the career field in the years to come.

Senior Master Sgt. Steward R. Harringshaw
3E0X2 Force Development Manager

3E1X1 HVAC & REFRIGERATION

It has been another busy year for heating, ventilation and air conditioning (HVAC). Starting with the January 15, 2017 Career Field Education Training Plan (CFETP) publication which drove the all new revamped Air Force unique three-level apprentice course with the first graduating class in April 2017. This CFETP also drove the April 25 activation of the five-level career development courses which were reduced from a whopping 11 volumes down to five volumes. Finally, the new CFETP drove the one of its kind 15 day seven-level skill awarding craftsman course.

In addition to all the formal training changes and investments that have been made for our heating, ventilation, air conditioning and refrigeration (HVAC-R) technicians, we've also been diligently working on garnering training from the civilian sectors' major HVAC vendors and training institutions. In the absence of advanced supplemental courses at Sheppard Air Force Base, Texas, the purpose behind this effort is to provide much needed advanced systems training above and beyond the training offered in the initial apprenticeship course. To date, the Air Force Civil Engineer Center (AFCEC) Force Development Division has advocated for and funded 52 seats at Trane University located in La Crosse, Wisconsin. This training is open to all active duty and civilian HVAC-R technicians responsible for maintaining Trane equipment on their base. We are currently working on adding more name brand-specific vendor training efforts. In addition to Trane, we are also trying to secure training with the HVAC companies Carrier and Daikin as their equipment also has a very large presence on our bases.

Vendor training is not new to civil engineers, but centralized funding on an enterprise-wide scale is. The cost savings garnered because of centrally funding vendor training on an enterprise–wide scale can be as much as 40 percent. This effort is not intended to replace base-level vendor training needs and efforts.

Senior Master Sgt. Mark Morgan
3E1X1 Force Development Manager

3E2X1 PAVEMENTS & EQUIPMENT

The current Career Field Education and Training Plan was published on October 12, 2016, and the newest Career Development Course (CDC) volumes, 3E251-EC 02, became available to our community February 14, 2017.

We have continued the expansion of our civilian accreditation of the AFCEC-approved Mobile Crane Training Course which now includes the 820th Red Horse Rapid Engineer Deployable, Heavy Operational Repair Squadron Engineer (RED HORSE) Squadron at Nellis Air Force Base, Nevada. This location marks the fifth site that members can attend to receive a 60-month civilian crane certification and classes are scheduled to begin in early 2018.

An initiative was set into motion to support the change to Air Force Instruction (AFI) 24-301 in May 2016, and to facilitate heavy equipment training across all civil engineer (CE) Air Force specialty codesto aid the implementation of the rapid airfield damage recovery program. A five-member team was assembled from across the major commands to create lesson plans to support home station training for vehicles in the following classes: dozer, grader, loader, farm tractor, excavator, compact track loader, backhoe and scraper…

In 2018, one of our primary focal points is to continue exploring opportunities with the Air Force Institute of Technology (AFIT) to develop a hybrid rigid and flexible pavement repair and maintenance course. This course will deliver more comprehensive and contemporary pavements training opportunities to our Airmen. This course will not only bridge the gap in pavements knowledge and training but will also be available on a web-based platform for easier enrollment and execution at the Home Station Training (HST) arena.

I would like to take this opportunity to thank the entire career field for the tremendous support you have given me, our career field and to the CE Enterprise and I am proud to serve in the world's greatest Air Force with each and every one of you!

Master Sgt. James J. Banik
3E2X1 Force Development Manager

3E3X1 STRUCTURAL

In October 2017, we published a change to the current career field education and training plan (CFETP)/specialty training standard, which removes contingency items no longer included in basic expeditionary airfield resources (BEAR) inventory and updates to professional military education requirements. We are anticipating the release of our occupational analysis survey in hopes of having it to the field by the end of January 2018. This will begin our training review process and will prepare us for our Specialty Training Review Team (STRT) and our Utilization and Training Workshop (U&TW), which are projected to take place later in fiscal 2018. We also identified changes to the contingency maintenance course in Gulfport, Mississippi. Changes will incorporate the most up-to-date lock equipment found in the field and provide enhanced roll-up door training. Simultaneous updates to the CMX web-based training reflect these changes as well.

To meet the implementation of Rapid Airfield Damage Recovery (RADR) into Silver Flag training, changes to the contingency training curriculum are ongoing. We are currently working to update the AM2 course and will be phasing out folded fiberglass mats (FFM) training in preparation for the implementation of the newest foreign object debris (FOD) cover fiberglass reinforced 0olymer (FRP). We have also reached the procurement phase of the newest paint striper and expect them to be purchased and fielded by the end of FY18. In an effort to meet down range requests for General Service Administration (GSA) certified locksmiths we continue to strive for approval to directly tie the requirements to unit type code (UTC) positions and to centrally fund the training. We expect full approval and to send our first Airmen to training later in FY18.

Senior Master Sgt. Michael G. Hanna
3E3X1 Force Development Manager

3E4X1 WATER AND FUEL SYSTEMS MAINTENANCE

The new Career Field Education and Training Plan (CFETP) was published October 1, 2017. This training plan identifies all skill level and on-the-job training requirements for our Airmen. Visit http://www.e-publishing.af.mil/ and type in 3E4X1 to view the current CFETP.

Our team at the 366th Training Squadron implemented the new three-skill level apprentice course shortly after we published the CFETP. The new course incorporated the changes recommended by the specialty training requirements team and eliminated antiquated training tasks. The first class will graduate in mid-January 2018.

To ensure our Airmen are provided quality training, we delayed publishing the new career development course (CDC) and conducted a thorough final review. The first CDC set will be published in March 2018 and the second set in May 2018. We do not anticipate delays in upgrade training with the short gap between the apprentice course graduation and CDC enrollment.

We are finishing up the fire suppression systems web-based training course which will support training and be used as a job aid for experienced technicians. The course will be available on the CE virtual learning center in the second quarter of 2018.

This year we secured vendor training for our Airmen, military and civilians. Air Force Civil Engineer Center (AFCEC) purchased three fire system training classes and funded travel for personnel from 12 bases. We will continue to pursue more vendor training opportunities in 2018 to supplement skill development and mission support.

Have you heard of CE Dash? If not, visit https://cs2.eis.af.mil/sites/10159/scripts/homepage/home.aspx to view the site content, resources and support areas. Check out the Force Development page.

Thank you for the great things you do for our career field, the CE community and our Air Force!

Senior Master Sgt. David M. Kledzik
3E4X1 Force Development Manager

3E4X3 PEST MANAGEMENT

In 2017, pest management saw the roll-out of revised career development courses (CDC)s, and the consolidation of force development managers and CDC writer responsibilities into one position located at the Air Force Civil Engineer Center. The first change to the Career Field Education and Training Plan was published and a new wildlife management course was put online in the CE-virtual learning center. In coordination with the Air Force pest management subject matter experts and the Armed Forces Pest Management Board, we obtained a national stock number for a new utility vehicle and spray equipment for installation and contingency operations.

For 2018, our focus will be on four main areas: First, we will integrate continuum of learning (CoL) concepts into the pest management apprentice, initial and recertification classes. Second, we will apply CoL methodology to the Silver Flag curriculum to include reachback, prime readiness in base service (Prime RIBS) capabilities (dining facility and mortuary affairs) familiarization. Unit type code feedback from all stakeholders will be used to update and revitalize equipment and home station/Silver Flag training. Third, we will resolve ongoing communication shortfalls throughout the pest management re-certification scheduling and applicators license extension requests. Finally, we will complete the revision of the first four volumes of the Department of Defense Manual 4150.07 which are the parent documents that drive training agreements in accordance with the Federal Insecticide Fungicide and Rodenticide Act and the Air Force 32-1053 integrated Pest Management Program.

Master Sgt. William J. Clark Jr.
3E4X3 Force Development Manager

3E5X1 ENGINEERING

The past year has been amazing for the engineering Air Force specialty, with emphasis on maintaining proficiency on a plethora of surveying, drafting, mapping, construction management and contingency tasks. This was accomplished by support from major command functional manager chiefs and subject matter experts (SMEs) and their facilitation of training support and equipment and systemic changes.

In April 2017, nine Air Force qualification training packages were rejuvenated by replacing obsolete procedures and practices to create step-by-step instructions for 84 tasks, utilizing over 1,200 checklist items for upgrade training and maintaining proficiency. Later that month, the total force contingency combat training curriculum, wartime task standards and 4F9EH & 4F9GP unit type codes were updated and modernized to meet new Air Force tactics, techniques and procedures.

At the Technical School at Fort Leonard Wood, Missouri, two significant initiatives were accomplished with the apprentice and supplemental training courses. The school was fitted with state-of-the-art optical and global navigation satellite services surveillance equipment to reinforce "back to basics" techniques by utilizing modern technology. Additionally, inbound FY19 pipeline students will deconsolidate from the Interservice Training Review Organization surveying phase, which will strengthen the Air Force-centered geospatial base sustainment and expeditionary skills.

The year culminated with the Specialty Training Review Team (STRT). Eleven major command SMEs and Air Force Education Training Command support staff reviewed and made recommendations for all specialty training standards for skill levels five and seven to the Civil Engineering Chiefs Council. The STRT also led to constructive discussions on the future and trend analysis of 3-dimensional scanning, building information modeling and vendor training.

Senior Master Sgt. Tyler A. Adams
3E5X1 Force Development Manager

3E6X1 OPERATIONS MANAGEMENT

It has been quite a busy year for the operations management career field. The second and third waves of TRIRIGA were rolled out at nine bases. TRIRIGA is an enterprise information technology system that provides an integrated asset management structure for the civil engineering community. Reference guides and playbooks were updated, providing helpful information for implementation of TRIRIGA at the installation level. Additional training is located on the CE portal at https://cs2.eis.af.mil/sites/10041/it_initiatives/nexgen_it/Pages/NexGenIT_Training.aspx.

Career development course Edit Code 04 was officially deactivated. A total of 104 graduates of the JAE003E651 00AE Interim Operations Management Apprentice course were provided upgrade training opportunities through completion of two continuing education courses hosted by the Air Force Institute of Technology, WMGT 436 Requirements and Optimization and WMSS 301 Introduction to Asset Management. To meet the needs of the field, material is continually reviewed and updated to ensure courses provide up-to-date education that reflects policy and practice in the enterprise. For course information and details, go to https://www.afit.edu/CE.

Sheppard Air Force Base, Texas, hosted the Specialty Training Requirements Team in November 2017. Major command functional managers and subject matter experts from several commands gathered at the 366th Training Squadron for one week to discuss and develop life-cycle education and training requirements. As a result, a revamped Career Field Education and Training Plan (CFETP) is scheduled to be published in 2018. This will provide supervisors and trainers with a guide to facilitate on-the-job training, as well as upgrade training efforts in line with transformation activities. Critical changes to the revised CFETP will include implementation tasks based on Program Action Directive 12-03 guidance. This will replace the last CFETP published in 2011.

This upcoming year promises to be one of continued transformation with plenty of opportunities for growth, development and success for Airmen. I look forward to working with each of you as we strive towards progress and pursue excellence!

Senior Master Sgt. Tiffany N. Griego
3E6X1 Force Development Manager

3E7X1 FIRE EMERGENCY SERVICES

In 2017 the Air Force Civil Engineer Center (AFCEC) built three multimedia courses centered on safety. The rapid intervention course is a 10-hour cognitive and practical application course designed to teach firefighters advanced self-rescue and peer-rescue extraction techniques. A 6-hour firefighting agent tactics, techniques and procedures training class was built and designed to give an overview of myriad firefighting agents and proper application techniques for the various fuel sources firefighters may encounter. Finally, a 4-hour personal protective equipment training course was developed to educate members on the proper selection, inspection, care, maintenance, cleaning and disposal of contaminated gear. Protecting and educating our firefighters is priority one!

Additionally, in 2017, AFCEC procured 186 Eco-Logic retro fit kits designed to test fire apparatus without discharging aqueous film forming foam. The Eco-Logic kit reduces foam usage and protects the environment from potential contaminants. This device provides precise measurement of the foam proportioning system, which was not previously available

Finally, a long-awaited contract was awarded that established a sole source of personal protective equipment for Air Force firefighters. This contract ensured a minimum level of protection ensuring the safety of our members in garrison and deployed.

Senior Master Sgt. Brad Sykes
3E7X1 Force Development Manager

3E8X1 EXPLOSIVE ORDNANCE DISPOSAL

This year our team at Sheppard AFB, Texas, has worked diligently to the get the Team Leader course up and running. They have acquired a 26 acre training facility for live demolition. They have additionally pushed out advertisements for all the instructor positions and we should have them on the ground in May of 2018. The team at Sheppard also coordinated efforts with the Midwestern State University Exercise and Physiology department to provide form and nutrition for EOD Candidates as they enter the program. They also have received their own Physical Therapists and a 4N0X1 medic on site to assist Airmen's recovery after injury to get them back into the program.

The three Silver Flags sites have also moved to a new 10 day course curriculum covering Air Field Damage and Recovery operations. The focus is back on one of our primary missions, and it focuses on the use of heavy machinery, robotics, detectors and radios to coordinate clearance and recovery operations in order to get the runway back in operational condition as quickly and safely as possible.

Lastly the team at AFCEC has been working tirelessly with other entities as they work to roll out the Joint Service Training module that will incorporate all AFTR records and flight training records into one system to prevent dual reporting. The program is expected to roll out early FY19.

Chief Master Sgt Charles Price
3E8X1 Force Development Manager

3E9X1 EMERGENCY MANAGEMENT

The AF EM Program and EM career field provided outstanding support to combat power through sound planning, management, and execution. Over the past year there was a renewed focus on the career field. Building off the problem statements identified in 2016, nine Integrated Process Teams (IPT) were formed. Team members developed solution sets for closing more than 15 action items. Of note was the development of the career field Proficiency Training Program (PTP) that will standardize training across the enterprise to ensure our Emergency Managers are prepared to respond regardless of where they are stationed. Other training opportunities presented themselves as well. Global Dragon 17 was the pinnacle of training events this year when 80 Air Force Emergency Managers descended upon the Guardian Centers in Perry, Georgia. This event brought Air National Guard and Active Duty forces together to mesh and hone their skills and provided upgrade opportunities not always accomplished at home station. The team at AFCEC created field and integration guides (FIGs) to ensure proper accountability of equipment, developed a new R&EM Flight Calculator, and revised Aircrew Flight Equipment (AFE) and ground crew requirements to incorporate excess assets leading to $5,100,000 in redistribution efforts. As emergency managers we provided support to AFNORTH during Hurricanes Harvey and Irma and furnished plume models and a detailed explanation of the threats and hazards at the Arkema Chemical plant in Texas. AFCEC/CXR identified locations of nuclear power plants, hazards, and information from the Nuclear Regulatory Commission regarding plant status, construction, and staffing for the State of Florida, and attended National Security Education Program meetings and provided water surge prediction data. 2017 was a busy year for us and it is reasonable to expect that 2018 will be no different.

Chief Master Sgt Stephen Daggett
3E9X1 Force Development Manager

8H000 Airmen Dorm Leader

In 2018 the 8H000 Airmen Dorm Leader (ADL) Special Duty Identifier (SDI) was approved as one of the 11 Developmental Special Duties (DSD). This was a huge step and signified the importance of hiring the right Airmen at the right time to be leaders and mentors for our dormitory residents.

We partnered with the Air Force Institute of Technology (AFIT) Civil Engineer School, Housing Managers, and current ADLs and we fielded a new in-residence ADL course that is being hosted by the AFIT Civil Engineer School at Wright Patterson Air Force Base. This provides an Air Force wide baseline for newly selected ADLs and will provide them the right training and tools to provide superior level of service to our Unaccompanied Airmen through leadership, mentorship and facility sustainment.

The one week course provides a policy based approach to the ins and outs of managing facilities and keeping an Unaccompanied Housing program running IAW DoD and AF mandates. The biggest change comes with the focus on human interaction skills consisting of suicide prevention, counseling, leadership and communication.

In the coming year we anticipate doing the first ever 8H000 ADL occupational analysis survey. This will help us adjust the course and the Job Qualification Standard to better reflect what ADLs are doing in the field.

Senior Master Sgt Stewart Herringshaw
8H000 Force Development Manager

Subject Matter Experts

The responsibilities of today's Air Force civil engineers span nearly every discipline of engineering and beyond. Our engineers frequently are called upon to provide a wide range of expertise to support commanders at the installation, combatant and major command levels. Because every civil engineer cannot be the authority in every area of engineering, the Air Force Civil Engineer Center (AFCEC) ensures subject matter experts (SMEs) are available to them.

Each of our civilian SMEs offers the unique blend of experience, education and training to be the Air Force's authority in an area of expertise. SMEs provide continuity as well as assurance that our civil engineering "know-how" keeps pace with lessons learned, changing technology, federal guidance and industry standards. The standards and criteria they publish help Air Force civil engineers work more skillfully and efficiently.

Although they might have gone by another name, subject matter experts have served within civil engineering for more than 40 years. Most SMEs have a master's degree or higher in their functional area, are registered professionals (or the equivalent) and are recognized as an expert by their peers and industry. Many within the Department of Defense and outside the Air Force benefit from civil engineering's subject matter expertise. They include joint working groups, industry partners and vendors, professional organizations and research programs.

On any given day, AFCEC SMEs can be found resolving issues impacting their area of expertise, developing technical guidance, giving advice to major command or installation engineers, working with national laboratories to advance the art of engineering, developing and advocating for required technical courses or mentoring technical personnel across the Air Force. Collectively, our SMEs represent a vast wealth of engineering knowledge and technical expertise. We hope you use the following pages to learn about the areas of expertise and take every advantage of this valuable resource.

Contact any SME at **NIPR**: afcec.rbc@us.af.mil **SIPR**: usaf.tyndall.afcec.mbx.afcec@mail.smil.mil

850-283-6995 | DSN 312-523-6995 | 888-232-3721 | Fax 850-283-6193 | Comm 850-283-0995 | Toll free 888-232-3721

SME Directory

Air Base Recovery and Acquisition

Alessandra Bianchini, Ph.D., P.E., AFCEC/CXA

Vision:

Ensure short- and long-term airbase operational capability through program development and research strategies towards airbase protection, resiliency and recovery technologies.

Scope:

The Air Force's authority in airbase recovery technology strategic planning for all actions (e.g., peacetime, pre-attack actions, trans-attack, post-attack). Leads investigations of operational deficiencies and provides guidance to support research and development strategies for airbase recovery of infrastructure worldwide to improve overall base resiliency. The primary interface with the research, development, test and evaluation) community to assure research investments and development in support of civil engineer agile combat support capabilities. Also prepares technical articles, engineering technical letters, guidance, training and other official publications and represents the Air Force on committees and technical working groups while staying current on policy and technical developments.

Initiatives and Developments:

The recent rebalancing to the Pacific and European theaters is forcing special attention on the few bases directly located in those areas and to ones that have a fundamental strategic role within the newly addressed scenario. Initiatives include leading working groups in the pavements area to highlight needs and future development for long-term solutions aimed at strengthening infrastructure reliability with respect to mission operational needs. Other initiatives include formalizing, within an evolutionary process, the current airfield damage repair initiatives dealing with the forecasted threat scenarios to ensure the program consistently maintains capabilities and mission, providing outreach to academia, for development efforts supporting CE needs, and to the small business community for developmental efforts that yield substantive and innovative products for Air Force CE.

Air Quality

Francisco Castaneda, III. P.E., AFCEC/CZT

Vision:

Protect and support the Air Force mission and the natural environment by effectively managing, sustaining and continually enhancing the air quality natural infrastructure resources through regulatory compliance, regulatory risk minimization, professional competency, value engineering, sustainable practices and the pursuit of emission reduction.

Scope:

The program protects human health and the environment from harmful effects of air pollution through sustained regulatory compliance with the Clean Air Act (CAA). The program is executed on a cyclic plan-do-check-act approach to effectively yield long- and short-term improvements in regulatory risk reduction, personnel proficiency and contingency planning. Strategically executes guidance, policy and interventions to ensure environmental stewardship while focusing on the Warfighter's operational requirements. Support includes: air quality excellence advocacy, execution guidance, technical consultation, value engineering, corrective actions, air impact analysis and general conformity assistance, processes tracking, training development and compliance tracking and metrics. Provides the expertise, technical support, compliance tools, permitting support, corrective action resources, specialized guidance and training resources to achieve and sustain compliance with the CAA.

Initiatives and Developments:

- Value Engineering: A proactive regulatory risk management effort for correcting identified noncompliance and reengineer base-level programs for long-term compliance sustainability. Applied at 18 installations with over 475 compliance issues identified, resulting in an average regulatory risk reduction of 78 percent.
- Asset Management Automation: Successfully sustaining compliance through automation. The Air Program Information Management System is an enterprise-wide, web-based information management solution for storing, managing and tracking air quality data. The Air Conformity Applicability Model) is a specialized, stand-alone application for modelling and evaluating air quality impacts of proposed Air Force actions.
- Permit Reviews: Technical review of permit/renewal applications and related documentation to remove unwarranted requirements and regulatory burden. Since late fiscal 2017, reviews at 10 installations resulted in right-sizing of permit type, control technologies, major source determination and petitions to remove Title V permits.
- Emergent Compliance Consultations: Technical consultations on emergent issues, notice of violation corrective action, preemptive compliance reengineer consultation and National Security Exemption consultations.

Airbase Requirements

Robert "Ken" Crowe, AFCEC/CXA

Vision:

Ensuring future civil engineer airbase capabilities are identified and validated for establishment, protection, sustainment and mission transition of expeditionary, in-garrison and contingency installations and bases. Deliver an accurate-capabilities baseline to identify future civil engineer capability gaps, leading to solutions and assurance of air dominance.

Scope:

Responsible for providing expert advice to the Air Force civil engineer, air staff, major commands, Air Force Installation and Mission Support Center, Air Force Civil Engineer Center and base commanders for airbase systems, equipment, technology and data. Leads CE airbase capability requirements development through the Joint Capabilities Integration and Development System (JCIDS) or functional issues process and directs capability requirements document development. Provides technical information, programming and budgeting estimates and high-level capability performance objectives to support the CE airbase requirements and acquisition process. Has authority and responsibility for airbase policy and requirements processes relative to world-wide civil engineer mission capabilities and airbase mission capability objectives identified in defense planning guidance and national military strategy and flow-down strategic guidance. Is requirements management certified at B+.

Initiatives and Developments:

Industry Trends

- Developing accurate accounting of internal processes (capabilities) and linking to desired outcomes (needs) to optimize and initiate processes for better results.

Program Challenges

- Institutionalizing the Air Force's policy change for CE requirements and acquisition from risk avoidance to a risk management organization supporting JCIDS, the Defense Acquisition System, the CE Strategic Plan and defense planning guidance.
- Incorporating CE processes with Air Force warfighting integration capability as agile combat support moves away from core function support plans.

Critical Initiatives/Developments

- Developing and producing a capabilities-based assessment founded on current baseline and capability gaps.
- Documenting the CE basing resilience baseline with appropriate capability-based assessments (CBAs) to allow CE integration within the JCIDS systems.
- Creating computer-based tool, the Acquisition Decision Support System, for the development and documentation of the CBA, providing linkage to defining references and documenting the analysis of capabilities.

Airfield Criteria, Markings and Aircraft Arresting Systems

Barry Mines, Ph.D., P.E., AFCEC/COS

Vision:

Facilitate safe airfield operations through proper siting criteria for facilities in and around operational airfield surfaces.

Scope:

The Airfield Criteria, Airfield Markings and Aircraft Arresting Systems (AAS) SME provides technical assistance to Air Force engineers and community planners to facilitate safe operations at Air Force operating locations worldwide. Works closely with the Air Force Life Cycle Management Center (AFLCMC) to procure AAS and the Air Force Installation and Mission Support Center providing program management. Represents the Air Force on the Tri-Service Aviation Discipline Working Group to develop consolidated Department of Defense (DOD) engineering standards and criteria for airfield facilities. This program is wide-ranging, covering criteria for airfield layout, design, imaginary surfaces and proper siting clearances. Interfaces with the Air Force Flight Standards Agency, the other services, the Federal Aviation Administration and North Atlantic Treaty Organization to develop common standards.

Initiatives and Developments:

- Work with the Federal Aviation Administration to update Advisory Circular (AC) 150-5220-9 Aircraft Arresting Systems on civil airports and include newer systems to be used by Air National Guard units operating at civilian airports.
- Continued interface with the Joint Strike Fighter office on additional aircraft arresting system testing compatibility needed for the F35A as well as jet and thermal blast issues for apron design.
- Work with U.S. Army Corps of Engineers to develop a technique to install a mobile runway edge sheave on an asphalt pavement which overlays a gravel base course and the design of a dead-man anchor instead of manta ray anchors.
- Collaborating with AFLCMC to develop a protocol for replacement of all anchor bolts of an aircraft arresting system fairlead beam as the technical order does not currently have a technique that allows replacement of all anchors if they have corroded or failed a non-destructive test.

Antiterrorism, Security and Small Arms Ranges

Jeffrey Nielsen, P.E., AFCEC/COS

Vision:

Improve protection for Department of Defense personnel and assets against terrorism and illicit activity using enhanced planning and design standards incorporated into new and existing facilities.

Scope:

The Antiterrorism SME provides guidance and criteria to mitigate the risk from terrorist attacks and protect Air Force assets on garrison and expeditionary installation. Promotes site planning, design and construction compliance, develops design criteria, offers technical consultation and represents the Air Force on developing DOD engineering standards and criteria for facility mitigation. Security engineering covers a wide range of threats including explosive devices, direct and indirect fire weapons, airborne hazards, forced entry and surveillance. Also manages the Air Force small arms range design criteria and standard facility prototype drawings. The small arms range SME works in collaboration with the Air Force Security Forces Center and the Air Force Medical Support Agency to review the design of all new and rehabilitated ranges and to maintain safe operations.

Initiatives and Developments:

- Replacement of Engineering Technical Letter (ETL) 11-18 with a tri-service Unified Facilities Criteria (UFC) 4-179-02, Small Arms Range Design.
- Developing standard statement of work for modular range acquisition.
- Major updates and revisions to Antiterrorism UFCs 4-010-01 and 4-020-01.
- Entry control facility (ECF) gate runner investigation and ECF evaluations.
- Electric vehicle stopping devices trial operation demonstration at Tinker Air Force Base, Oklahoma.
- New UFC for forced entry criteria to replace 1993-era MIL-HDBK-1013/1A.
- Developing continental U.S-wide active vehicle barrier maintenance indefinite delivery, indefinite quantity (IDIQ) contract
- Partnering with Air Force Institution of Technology and Engineer Research and Development Center to develop expeditionary overhead cover support structure using commercial off-the-shelf materials.

Architecture

Randall L. Lierly, R.A., AFCEC/CF

Vision:

To facilitate and advance the confluence of architects', interior designers' and landscape architects' skills, knowledge, creativity, commitment, vision and resources to promote and sustain quality design of Air Force facilities.

Scope:

The program provides guidance on facility architecture, interior design and landscape architecture, as well as tools, resources, expertise, processes, technical information and techniques to achieve quality design. Responsible for program guidance, policies, promotion and implementation. Develops design criteria for Air Force facilities and represents the Air Force on DoD and technical panels, such as the Tri-Service Architecture Discipline Working Group under the UFC program and the Whole Building Design Guide Advisory Committee. Works with the career field manager on mentoring, training, education, recruitment, retention and professional registration opportunities. Manages design standards, accessibility and design technologies issues.

Initiatives and Developments:

- Managing updates to Air Force Corporate Facilities Standards.
- Continued implementation of the Installation Facilities Standards Tool across the Air Force.
- Providing reach-back for accessibility, design technology issues and criteria interpretation.
- Coordinating and collaborating with design professionals in other federal agencies.
- Advancing the use of building information modeling (BIM) in the Air Force as outlined in U.S. Army Corps of Engineers Engineering and Construction Bulletin 2018-7, Subject: Advanced Modeling Requirements on USACE Projects, June 6, 2018.
- Promoting adoption of design practices that incorporate the principles of economic, social and ecological sustainability into the built environment.
- Defining Air Force expectations and standards that deliver consistent, cost-optimized, quality facility designs.
- Enhancing retention and career progression by providing Air Force architects with incentives to engage in civil engineer career field advancement programs and opportunities.
- Assuring the Air Force is evolving with the Architecture, Engineering and Construction (AEC) industry by analyzing new design and construction methods and technologies.

Chemistry

Vacant, AFCEC/CZT

Vision:

To promote the implementation of good chemistry practices and quality systems that facilitate and enhance project planning and the acquisition of quality data for sound decision making in Air Force restoration projects.

Scope:

The Chemistry program promotes the acquisition of defensible environmental data by providing guidance on chemistry practices and quality systems and supplementing with training, consultative expertise, and other specialized technical information to support environmental restoration goals and objectives. Responsible for the advocacy and implementation of environmental data acquisition policies and for oversight of environmental quality systems, including project planning, data collection and review and technical consultation. Represents the Air Force on tri-service and interagency workgroups, including the Department of Defense Environmental Data Quality Workgroup and the Intergovernmental Data Quality Task Force, to develop standards for the Air Force and DoD. Provides Air Force oversight for the DoD Environmental Laboratory Accreditation Program to ensure analytical testing consistency and compliance with the DoD Quality Systems Manual.

Initiatives and Developments:

- Implementation and surveillance of a DoD-wide environmental laboratory accreditation program.
- Development of minimum quality control criteria for the detection of emerging contaminants, such as per- and polyfluoroalkyl substances and 1,4-dioxane.
- The use of environmental forensic chemistry techniques, such as isotope analysis, to determine sources of environmental contaminants, as well as monitor the performance of Air Force remediation systems.
- Broad application of a performance evaluation sampling program as an additional quality check of laboratory capability in Air Force performance-based remediation contracts and emerging contaminant sampling efforts.
- Intergovernmental implementation of the optimized Uniform Federal Policy for Quality Assurance project plans as a means to document project-specific decision logic, problem definition, data requirements and exit strategies.
- New sampling and analysis techniques such as passive samplers, incremental sampling methodologies, and the use of tandem mass spectrometry analysis for the characterization of hazardous waste sites.

Corrosion Control

Robert J. "Bob" Evans Jr., P.E., NACE CP Technologist, AFCEC/COS

Vision:

Develop and implement plans, processes and procedures to improve the Air Force's ability to identify, control and mitigate corrosion in facilities, infrastructure and associated systems. Familiarize Air Force civil engineer personnel with corrosion control concepts to significantly reduce impact of corrosion on facilities, infrastructure and associated systems while increasing mission readiness, improving sustainability and safety, and saving energy.

Scope:

Focuses on preventing and mitigating material deterioration of facilities and infrastructure (F&I) by addressing the four areas of corrosion control: cathodic protection, protective coatings, industrial water treatment and design/material selection. Represents the Air Force on DoD Corrosion Prevention and Control Working Integrated Product teams to develop criteria, tools and training to prevent and mitigate corrosion degradation of F&I. Is also the Air Force F&I representative on the Air Force Corrosion Prevention and Control Working Group, which researches, predicts and prevents corrosion while managing corrosion-related strategies for acquisition, construction and maintenance of equipment, weapons, facilities and infrastructure. The working group identifies pervasive corrosion issues, provides advocacy within member organizations and monitors corrosion activities related to enhancing systems safety, system availability and lower operating costs.

Initiatives and Developments:

- Developing additional corrosion prevention and control (CPC) source pages in the Whole Building Design Guide with quick access to training, criteria and related corrosion resources.
- Developing an Environmental Severity Classification tool to assist engineers in planning, design, construction and operations and maintenance of F&I within the respective environment.
- Identified key corrosion cost drivers through studies and surveys to help prioritize distribution of limited resources.
- Integrating CPC principles, criteria and requirements from Tropical Engineering United Facilities Criteria (UFC) into varying engineering disciplines' UFCs and Unified Facility Guide Specifications.
- Initiating corrosion training requirements based upon position and knowledge proficiency in a Facilities Training Summary table.
- Integrating new technology projects into corrosion processes, procedures and/or criteria.
- Updating Facilities Corrosion Training Summary table and incorporating corrosion training into other functional areas.
- Initiating corrosion control assessments and training for base civil engineer personnel in conjunction with asset visibility team visits.

Cultural Resources Management

James D. Wilde, Ph.D., Archaeologist, Deputy Federal Preservation Officer, AFCEC/CZT

Vision:

Increase mission capacity on bases and ranges by creative compliance, accurate inventories, expert planning and engagement with stakeholders and commanders.

Scope:

Cultural Resources Management (CRM) comprises three broad categories: archaeology, historic facilities and Native American issues. As Deputy Federal Preservation Officer, assists Air Force Installations, Environment and Energy/IEI with data and issues related to the Air Force's role in national historic preservation. Is responsible for program guidance, policies, promotion, assistance and implementation of, and adherence to, the National Historic Preservation Act (NHPA), the Archaeological Resources Protection Act and the Native American Graves Protection and Repatriation Act, among others. Oversees and directs the Air Force CRM Program, chairs the Cultural Resources Panel, updates Air Force instructions (e.g., 90-2002, "Air Force Interactions with Federally Recognized Tribes" and AFI 32-7065, "Cultural Resources Management"). Manages the CRM eDASH page and playbook, and compiles, validates and reports CRM and Native American data required by Secretary of the Air Force and Headquarters Air Force, the Department of Defense, the Department of Interior, and Congress. Represents the Air Force on a variety of DoD and federal agency working groups, committees and teams.

Initiatives and Developments:

Industry-wide developments that improve Air Force CRM include the growing use of small drone aircraft with multispectral cameras for analyzing landscapes, 3-dimensional laser scanning of historic buildings as mitigation for proposed changes or demolitions, continual improvements in visualizing software and remote sensing technologies and methods, ever-improving digital cameras and data collection methods and better use of the geospatial information system. Currently digitizing, curating and storing archaeological and building data in partnership with Arizona State University's "the Digital Archaeological Record" (tDAR). Air Force CRM annually: Programs to gather/digitize data from Air Force installations to submit to tDAR; plans, programs, budgets and executes archaeological surveys on ranges to reach the NHPA requirement of 100-percent agency lands inventoried for significant properties; oversees data collection and analyses to find, interpret and communicate information to warfighters about significant cultural, archaeological, historical and heritage data to ensure U.S. forces minimize impacts to these important resources.

Electrical Power and Lighting

Rexford Belleville, P.E., AFCEC/COS

Vision:

Create, promote and facilitate the state-of-the-art technologiesthat will advance electrical engineering skill, knowledge, creativity and commitment for the development of efficient, effective and resilient construction supporting Air Force missions.

Scope:

Addresses all issues pertaining to electrical safety, power and lighting facilities and installations. As the current chairman of the Department of Defense Electrical Discipline Working Group, the SME focuses on updating and creating Unified Facilities Criteria and guide specifications that govern construction, operation and maintenance of electrical infrastructure. Develops contracts for the evaluation of power distribution systems that include arc flash analysis, short circuit, load flow, harmonic, protective device coordination and system condition and status. Works with functional managers to identify training and support for shop personnel, and interfaces with industry and academia experts to evaluate new technologies that produce standards necessary to employ and advance the state of the art in government facilities.

Initiatives and Developments:

- Exploring advanced control capabilities for light-emitting diode (LED) for large high-bay indoor and outdoor high-mast area applications to improve light quality, reduce light pollution, minimize energy use, reduce glare and eliminate interference to adjacent mission technologies.
- Improving the accountability of backup power requirements to ensure mission capability through standardized documentation and proper sizing, tracking, testing, reporting and replacement using unified information platforms.
- Participating in the development of guidance that will harden and sustain mission critical facilities to ensure maximum mission endurance.
- Incorporating the study of electrical infrastructure reliability as a part of power system studies on different levels from the facility, lateral and feeder to the main substation and utility supply.
- Collaborating on the development of new energy resiliency guidance that will help identify and evaluate infrastructure improvements that will increase system flexibility and capability.
- Maintaining content and tools for CE DASH, an online resource that provides references, workspaces and reach-back capability for the civil engineer enterprise.

Electronics/Controls/Lightning Protection/Grounding

Joanie Campbell, P.E., AFCEC/COS

Vision:

Advance the convergence of engineering skill, knowledge, foresight and creativity to make operations simpler for and more maintainable by Airmen. Encourage and promote effective facility and system designs that produce common-sense infrastructure systems, correct the first time and meet all applicable standards. Ensure maintainability for crafts persons and system continuity, integrity and reliability for the user.

Scope:

The Electronical Controls SME provides tools, resources, processes, technical criteria and techniques on control systems, U.S. and North Atlantic Treaty Organization (NATO) airfield lighting, contingency airfield systems for in-theater operations, emergency power systems, grounding and bonding systems and lightning protection systems (LPS) to achieve effective and easily maintainable systems for the Air Force mission. Manages the program and participates on the Tri-Service Electrical Working Group to develop consolidated DOD engineering standards and criteria. Is a member of the National Fire Protection Association 780, LPS committee and regularly presents to the Illuminating Engineering Society aviation lighting committee, two NATO panels (Airfield Marking, Lighting and Infrastructure Panel and the NATO Air Services Procedures Panel), one NATO working group (Airfield Operations Services Working Group) and one Air Force Interoperability Council.

Initiatives and Developments:

- Maintaining a Lightning Protection System Inspection class for installations to provide third-party LPS inspections and avoid accepting projects with discrepancies and deviations from standards.
- Continued focus on generator authorization requests required to support authorized missions and ensuring the generator sizing is correct, saving scarce procurement and operations and maintenance dollars.
- Developing and updating the United Kingdom Standardization Agreement (UK STANAG) 4720 Safety Management Systems.
- Update of safety annexes for three NATO standardization agreements in compliance with STANAG 4720.
- Re-write of AFI 32-1065, Grounding Systems.,
- Initiated a study for transformer grounding which will identify more beneficial grounding of transformers.
- Development of Army/Air Force joint guidance on minimum requirements for contingency airfield lighting systems.
- Update of Unified Facilities Criteria (UFC) 3-535-01, Visual Air Navigation Facilities (changes/clarifications of current).

Emergency Management

Mike Connors, PMP, AFCEM, AFCEC/CXR

Vision:

Ensure the Air Force has a single, integrated "all hazards" program that effectively and efficiently protects the Air Force community and mission capability, leveraging joint, interagency and civilian capacity as necessary while ensuring continued operational capability.

Scope:

Provides chemical, biological, radiation and nuclear (CBRN) and EM program guidance, resource budgeting, education and training products, data collection analysis and logistical support to Air Force installations worldwide. Assists EM personnel in sustaining their mission and combat support operational capability in an all hazards environment while minimizing the loss or degradation of resources and equipment. Oversees the development and output of EM/CBRN tactics, techniques and procedures, and education and training products to provide installations worldwide with continuously updated mission preparation, response, mitigation and recovery support documentation. Additionally maintains a reach-back capability for EM personnel to directly engage with the Air Force Civil Engineer Center.

Initiatives and Developments:

- Established nine IPT) to resolve problems within Air Force EM Enterprise.
- Facilitated development of more than 120 CBRN training tools for the total force and conducted a personnel training event with approximately 170 attendees.
- Developed an EM Proficiency Training Plan to standardize training objectives which are flexible to each installation.
- Validated and coordinated shipment of $455,000 of unit type code equipment to 14 EM flights to fill critical shortages.
- Centrally procured $1.7 million in critical facility CBRN filters for high threat bases.
- Executed $2.2 million contract for general purpose mask M-50 inspection repair masks; ensures 377,000 masks are ready for warfighters.
- Validated 77 EM flight calculators consisting of 5,467 items, reduced cost by about $7.8 million from invalid requests. Acquired over 52,000 joint service lightweight integrated suit technology (JSLIST) training suits from the defense accountability reutilization and disposal, saving needed real-world assets from having to be used for training gear and avoiding approximately $23 million in costs.
- Procured 28,000 JSLIST training suits for enterprise to fill critical shortage.
- Enhancing the IEMP 10-2 Planning Tool; taking lessons learned and feedback to it improve functionality.

Energy Metering and Data

Daniel Gerdes, AFCEC/CNP

Vision:

Provide better tools and methods to easily identify and capture utility usage, including power, gas, water and steam. Champion resiliency efforts that have greater direct and indirect mission benefit than just meeting mandates or goals. Ensure all efforts consider both near-term targets and long-term sustainability resourcing needs.

Scope:

Installing meters and integrating control systems will provide visibility, system condition and utility usage, which will enable installations to plan resiliency projects and respond quickly to outages. Moving energy forward by looking at both traditional and non-traditional benefits of any energy opportunity for our facilities and infrastructure is the best foundation of any energy strategy. Every British thermal unit, kilowatt-hour or manpower hour conserved is one less we need to harden for our energy assurance. Defining and quantifying cost-effective solutions with defined benefits for the bases, CE enterprise and mission commanders is paramount.

Initiatives and Developments:

- Installing advanced meter infrastructure (hardware and software) centered on mission-critical facilities or mission critical nodes to allow true command and control of energy for mission owners.
- Investigating and proving the capability of other advanced operational technology sensors to interconnect with the approved advanced meter hardware/software.
- Leverage industry efforts with smart campus/smart building and interconnected sensors to provide a single common operating picture for bases, the enterprise and mission owners.
- Highlighting and driving potential benefits from using overwhelming data streams from meters and other operational technology devices to ensure resources are used where and when is most critical to support base level as well as matrixed missions.
- Establish Civil Engineer Operational Technology Cyber Playground testing area.
- Initiate cell to secure authority to operate cyber accreditation for enterprise-procured operational technology systems.
- Charter and establish the civil engineer's first operations center concept to mirror organizational and decision constructs similar to mission commanders.

Energy Savings Performance Contracts and Utility Energy Service Contracts

Michael Giniger, P.E., AFCEC/CN, CEM

Vision:

Leverage third party financing as a budget neutral funding stream through Energy Savings Performance Contracts and Utility Energy Service Contracts (ESPC/UESC) focused on Air Force and national energy security. Ensures ESPC/UESCs emphasize mission resilience through energy assurance using energy conservation measures, renewable energy, power generation and deployment of emerging energy technologies.

Scope:

The Air Force is the Department of Defense's largest energy consumer and has an obligation to reduce facility energy and water use. ESPCs/UESCs are a partnership between the Air Force and an energy service company (ESCO) or utility provider. The ESPC/UESC SME guides Air Force bases through complex third-party financed energy savings contracts. These projects require energy conservation measures to generate enough cost savings to pay for the project and financing over the term of the contract. Provides unbiased advice to the acquisition team. Provides expertise on policy implementation, assistance to ensure savings measurement and verification, participation on interagency working groups, technical support with energy and water efficient products and new technologies. Assists Air Force bases in meeting mission energy assurance goals and provides energy leadership.

Initiatives and Developments:

- Improve and update the ESPC/UESC playbooks located on the CE Portal.
- Maintain contact with bases to provide guidance and explain the use of ESPC/UESC contracts, make recommendations at critical contract junctures for a go/no-go direction.
- Stay abreast of technical positions that impact energy conservation measures within ESPC/UESC contracts.
- Improve synergy between AFCEC,the Office of Energy Assurance and functional experts, minimizing overlap.
- Coordinate with Air Force research and development groups to place the latest technology developments into ESPC/UESC contracts.
- Identify projects with resilient attributes of robustness, redundancy, resourcefulness, responsiveness and recoverability for investment in solutions that are cost-effective and resilient using third-party financing.
- Incorporate holistic resiliency measures into third-party financed contracts that reduce installation vulnerability.
- Cooperate with Federal Energy Management Program and energy service contractors to refine ESPC/UESC templates and standards.

Energy Surety (Security & Resilience)

Tarone Watley, P.E., PMP, AFCEC/COS

Vision:

Sustain an assured energy advantage for missions in air, space and cyberspace domains by improving resiliency, optimizing demand and assuring supply within the Air Force to include leveraging our partners at local, state and federal levels.

Scope:

Advises on policy changes, provides guidance and coordinates the exchange of information regarding energy infrastructure system (water, gas, electrical, wastewater). Warrants engineering resiliency throughout the Air Force. Ensures effective programs to support mission continuity despite interruption, impairment or lack of availability of any particular energy resource – i.e. enhance mission assurance through energy assurance – and provides operational and maintenance guidance to prevent adverse impacts on operations. Serves as the Air Force chair of the Department of Defense Renewable Energy Generation Working Group (REGWG) to develop consolidated DoD technical criteria. Applicability will include Air Force installations, environments and those systems or platforms used to assure Air Force missions in both peacetime and wartime operations.

Initiatives and Developments:

- Worked with Air Staff to publish Air Force Guidance Memorandum 18-01 to Air Force Instruction 32-1061, Utility System Performance Measures.
- Developing metrics for the Assistant Secretary of the Air Force for Installations, Environment and Energy's 5-Rs of Resilience (Robustness, Redundancy, Resourcefulness, Response and Recover).
- Training bases to use Utility System Outage Report Tracker, Interim Outage Reporting Tool and updating the tools to expand beyond electrical and include other reporting for other utilities.
- Updating CE DASH Energy Resiliency webpage.

Environmental Impact Assessment (National Environmental Policy Act)

Michael Ackerman, AFCEC/CZN

Vision:

Ensure timely support of Air Force mission requirements and better, more informed, decision-making through focused and disciplined execution of the Environmental Impact Analysis Process (EIAP).

Scope:

The Environmental Impact Assessment program provides enterprise-wide guidance, tools and execution support to ensure adequate consideration of environmental impacts during the federal decision-making process. Is the Air Force's authority on environmental impact assessment for Air Force actions in the U.S. and abroad. Serves as the senior consultant on issues related to the execution of the EIAP. Conducts policy reviews, prepares technical articles and presentations, develops training and provides guidance to Air Force personnel and organizations on EIAP execution for critical Air Force projects.

Initiatives and Developments:

Works in a number of areas to improve the execution of environmental planning across the Air Force. Initiatives include:

- Leading the integration of environmental planning into strategic acquisition, basing, airspace and asset management processes to ensure NEPA compliance and better decision-making in support of the Air Force mission.
- Development of templated product lines to promote streamlined and consistent application of NEPA across the Air Force.
- Development of programmatic approaches for efficient and cost-effective planning.
- Development of innovative, early stakeholder engagement processes and early planning approaches to facilitate project success.
- Leveraging existing systems, information and available technologies to facilitate more rapid, cost-effective and accurate environmental planning.
- Development of major command, proponent and base-level training modules and staff development tools.
- Coordination of the Air Force Civil Engineer Center NEPA workshop to cultivate and grow institutional NEPA expertise across the enterprise.

Expeditionary Engineering

Gregory A. Cummings, AFCEC/CXX

Vision:

Provide best tools and practices to organize, train and equip innovative Airmen engineers to accomplish missions in support of our warfighters. Implementing this vision supports CE enterprise end states: (1) "Agile, innovative Airmen Engineers enhancing air, space, and cyberspace operations across the globe." (2) "Resilient and "right-sized" installations with agile engineer capabilities to meet Air Force missions."

Scope:

Executes and implements established policy on the use and management of assigned civil engineer forces supporting the total force posture (Air National Guard, Air Force Reserves and active duty). Participates in broad and extensive studies in the management, administration and technical and professional direction of all functions, which include worldwide readiness training; readiness program policy implementation and guidance; military mobile force structure, contingency and wartime operations planning; civil engineer wartime equipage; civilian wartime force posture; and exercise, contingency deployment support and readiness-related asset management principles. Applies Air Force and joint military combat support experience to plan, organize and determine the necessary policies, regulations, directives, programs, doctrines and procedures for the establishment and maintenance of assigned major Air Force programs such as Prime Base Engineer Emergency Force (Prime BEEF) and Rapid Engineer Deployable Heavy Operational Repair Squadron Engineers (RED HORSE)).

Initiatives and Developments:

Rapid Airfield Damage Recovery (RADR): Fielding and training of rapid damage repair capability, development of rapid damage assessment near-term solution, assisting with development of rapid explosive hazard mitigation

- Analysis restructure of CE unit type code (UTC) deployable teams and equipment in support of emerging force presentation constructs for dynamic basing in non-permissive environments.
- Modernization of expeditionary equipment and facilities: RED HORSE vehicle standardization, basic airfield expeditionary resources modernization for energy-efficient shelters, next-generation emergency airfield lighting system, and Prime BEEF UTC equipment management.

Explosive Ordnance Disposal

John D. Olive, Ph.D., AFCEC/CXD

Vision:

Enable global combat support and Explosive Ordnance Disposal (EOD) response across the full spectrum of military operations to neutralize and dispose of all explosive hazards, leveraging innovative technology and employing highly trained warriors supporting combatant commanders in the projection of global air, space and cyber power. Promote and advocate for future organizational, training, equipment and modernization initiatives for the EOD program.

Scope:

Advises senior leaders on the development, sustainment and strategic direction of the EOD program, while providing mentorship to Airmen across the enterprise. Provides executive management, planning, programming and technical expertise in all areas of EOD readiness, support to civil authorities, homeland defense and combat operations, force protection, range activities and research, development, test and evaluation efforts. SME is responsible for oversight and development of EOD tactics, techniques and procedures, and is the final authority for technical issue resolution. Represents the Air Force as advisor to the U.S. Homemade Explosive Working Group, Department of Defense Operational Environmental Executive Steering Committee on Munitions, DoD Explosive Safety Board and other joint and national level committees developing DoD and industry EOD and unexploded explosive ordnance standards.

Initiatives and Developments:

- Core member of Installation and Mission Support Weapons and Tactics Conference (I-WEPTAC)Base Resiliency (BR) Mission Area Working Group, identified critical BR capabilities for a vontested, fegraded, operationally limited environment, informed a $176 million resourcing decision for rapid explosive hazard mitigation technologies.
- Co-lead for 2018 Eastern National Robot Rodeo and Capability Exercise, a multi-agency, international event, —partnering with industry and driving EOD future robot development Air Force advisor for EOD Day on the Hill in Washington D.C.; briefed congressional caucus — educated members on Air Force explosive hazard mitigation efforts.
- Chartered member of Joint Service EOD Program Board (general officer-level) Collaboration Sub-Integrated Process Team(IPT); championed JS force development and created "Collaboration Map."
- Chaired, EODIMS Joint Configuration Control Board; four services now have a single incident Reporting database — critical capability, supported more than 4,500 EOD operators. Hand-selected for Chief Staff of the Air Force-directed CE Personnel Unit Type Code (UTC) Revamp Working Group; drove fundamental UTC construct changes and improved Air Force presentation of forces. Core member of AFIMSC Installation Protection/Emergency Services 2.0 IPT; created innovative concepts to best support our installations.

Facility Design and Construction Standards

David M. Duncan, R.A., LEED AP, AFCEC/CF

Vision:

To facilitate and advance the Air Force Standard Design Program, increase design and construction criteria knowledge, establish better means of identifying, accessing and evaluating criteria, and to properly apply criteria to Air Force design and construction.

Scope:

The Air Force Design and Construction Standards Program encompasses technical criteria development, implementation and problem resolution for programming, design and construction of Air Force facilities. Serves as the Air Force's final technical authority for matters relating to construction criteria. These criteria include government/agency policies, laws and regulations, unified facility criteria and international codes. Represents the Air Force on numerous design and construction committees and working groups, including various tri-service discipline working groups. The Facility Design and Construction Standards SME is responsible for technical matters concerning overall building construction, working in close coordination with other Air Force SMEs.

The standard design program consists of providing optimized, consistent and functional facility requirements. Standard designs will increase planning and programming accuracy, manage customer expectations and reduce customer changes during construction.

Initiatives and Developments:

- Maintaining a library of Air Force standard designs on the Whole Building Design Guide.
- Reformatting/updating existing standard designs into a common, straight-forward format.
- Categorizing standard designs into three types: static, modular and harvested.
- Using Future Years Defense Program to determine candidate facilities for standardization.
- Harvesting standard designs from recently completed Air Force construction projects as needed for replication at other installations.
- Establishing a post-construction feedback system to determine effectiveness of standard designs.
- Serving as Air Force member of Aviation and Unified Federal Guide Specifications Discipline Working Groups.
- Working to increase access to non-government standards across Air Force civil engineer community.

Facility Related Control System Cybersecurity

Tim Nauman, P.E., AFCEC/COM

Vision:

Support Air Force civil engineers in securing Facility Related Control Systems (FRCS) that deliver resilient infrastructure for the Air Force mission.

Scope:

Provides guidance to Air Force leadership related to policy and governance for cybersecurity of FRCS; supports the Department of Defense Unified Facilities Criteria (UFC) Discipline Working Group that governs construction, operation and maintenance of secure control systems; provides technical support to Air Force Civil Engineer Center (AFCEC) directorates and civil engineer squadrons for incorporating facility related cybersecurity requirements into design and construction projects; and informs the Air Force civil engineer community of industry best practices and the state of current industry efforts to secure control systems.

Initiatives and Developments:

- Supports the efforts of Air Force leadership to resource the efforts to identify, prioritize and secure FRCS located at Air Force installations worldwide that support critical mission infrastructure.
- Provides secure design concepts in the project planning of FRCS delivered to the Air Force. These systems are acquired as part of real property projects that include military construction, Energy Savings Performance Contracts and other energy-related service contracts.
- Improves the contract specification language to deliver the documentation needed by civil engineer squadrons to support the Air Force Risk Management Program. This documentation includes architecture diagrams, hardware and software lists, data flow diagrams, system security and recovery plans that document the cybersecurity features engineered into control systems.
- Develops secure control system technologies to collect performance data from energy and FRCS while keeping these civil engineer systems secure.

Fire and Emergency Services

Kevin Matlock, AFCEC/CXF

Vision:

Foster a culture of highly skilled total force professionals dedicated to preventing loss of life and mission capabilities. Protecting both enduring and expeditionary installations, people, resources and the environment through world-class fire prevention and community-based full-spectrum emergency response.

Scope:

Advises senior leaders on the development and sustainment of the Fire and Emergency Services (FES) program while providing technical support to the FES community. Assists the Air Force fire chief in the management, planning and programming in all areas of FES. Responsible for developing tactics, techniques and procedures and is the final authority for technical issues. Represents the U.S. on the North Atlantic Treaty Organization (NATO) Crash Firefighting Rescue Panel. Represents the Air Force as a principle member of the national consensus code- and standard-writing committees that develop National Fire Protection Association standards. Directs the Department of Defense FES certification program and the Air Force fire vehicle modernization program.

Initiatives and Developments:

- Partnered with the Army to obtain International Fire Service Accreditation Congress accreditation for Urban Search and Rescue school at Fort Leonard Wood, Missouri, to meet Defense Support for Civil Authorities requirements.
- Partnered with the DoD Fire Academy to develop a Fire Officer IV Distant-Learning course. Curriculum was developed to meet the 2014 National Fire Protection Association's job performance requirements. Content delivered two courses in FY17 which doubled the throughput using the distant learning platform instead of in-residence.
- Released an update to the Fire and Emergency Service Management Tool (FESMT) database application. The FESMT combines the emergency Response Capability tool, Air Force Common Output Level Standard calculator, Fire Emergency Response Notification System, Fire Emergency Services Assessment Program, Facility Risk Assessment Program and the National Fire Protection Association 1500 database applications into one tool.
- Chartered the next generation Self-Contained Breathing Apparatus Working Group, developing a roadmap for Air Force procurement anticipated in FY19/20. Multi-function group attended the Fire Department Instruction Conference to assess manufacturer technological advances to publish a product description.

Fire Protection Engineering

Frederick (Fred) K. Walker Jr, AFCEC/COS

Vision:

The Air Force will be the leader in providing mission continuity and a safe work and living environment for all Department of Defense personnel.

Scope:

The fire protection engineering program SME recommends policy, provides guidance and coordinates the exchange of information regarding fire protection engineering management throughout the Air Force, ensures effective programs to support mission continuity and provides operational and maintenance guidance to prevent adverse impacts on operations. Serves as the Air Force representative on the DoD Fire Protection Engineering Working Group (FPEWG) to develop consolidated DoD technical criteria and works closely with contract support activities to ensure contract templates adequately address installation needs. Principal member of the national consensus code writing committees for the National Electric Code, the Life Safety Code, airport facilities standards and fire extinguishing system standards.

Initiatives and Developments:

- Reduce our reliance on chemical-based fire suppression agents.
- Improve our response to automatic system operations and integrate our installed systems as tool for the emergency response forces' use.
- Improve our expanding use of unified criteria across the DoD enterprise.
- Develop tri-service technical guide for electronic equipment protection (replacing an engineering technical letter)
- Develop tri-service technical guide for remotely piloted aircraft control facilities.
- Improve our technical tool pouch (CE DASH) to enable bases to make appropriate mission continuity decisions without having to seek Air Force Civil Engineer Center guidance.
- Continue implementing improvements to fire protection requirements in aircraft hangar projects making our systems more reliable.
- Implement ventless food service equipment technology in Air Force facilities.

Fuels Infrastructure, Vertical Transportation Equipment, Natural Gas, Plumbing

Stephen Day, P.E., AFCEC/COS

Vision:

Support the construction, repair and maintenance of fuel, vertical transportation equipment, natural gas and plumbing infrastructure by providing clear U.S. and North Atlantic Treaty Organization (NATO) criteria, standard designs, Air Force instructions and technical support, improve base support and advance technology transfer.

Scope:

Delivers guidance and technical support on the construction, repair and maintenance of Air Force fuel, vertical transportation equipment, natural gas and plumbing infrastructure. Coordinates with other AFCEC divisions, the Air Force Petroleum Office and the Defense Logistics Agency in support of the Air Force fuels maintenance community. Specifically, supports the force development manager on personnel training and development concerns which range from formal training to how to improve the job training for Airmen in the career field. Involved with the development of new technology supporting the water and fuels systems maintenance shop, such as, the development of a new Water and Fuels Expedient Repair System (WaFERS) to replace rapid utility repair kits (RURK) and the development of a new facility assessment tool for planning studies and internal assessments FUELER.

Initiatives and Developments:

- Special Experience Identifier (SEI) has been approved for fuels maintenance personnel. Initial implementation should be coming around April 2019.
- Development of CE DASH as an online reference tool. Using the workspace forum for the shops to provide feedback to the SME and crosstalk with other fuels maintenance personnel.
- The Fuels Facilities Engineering Panel (FFEP) has approved the use of FlexSteel in Department of Defense fuel systems. The guidance is currently being updated.
- The WaFERS was tested and commissioned summer 2017 and estimated to start fielding in winter 2018.
- The FFEP has transitioned and has stood up as a separate DoD Fuels Discipline Working Group under the Unified Facilities Criteria (UFC)program.
- After five years of work, a revised DoD UFC 3-460-03, Petroleum Fuel Systems Maintenance, was published.

Hazardous Material, Hazardous Waste and Pollution Prevention

Kevin G. Gabos, CIH, AFCEC/CZT

Vision:

The Air Force Hazardous Material Management, Hazardous Waste and Pollution Prevention programs mitigate warfighter environmental, safety and health risks through the identification, authorization, tracking, minimization and final disposition of chemical substances supporting Air Force mission activities worldwide.

Scope:

The Hazardous Material, Hazardous Waste and Pollution Prevention programs provide the capability to identify, authorize and track the lifecycle of hazardous chemicals to meet regulatory reporting and environmental risk reduction. Collectively, these programs identify, authorize, and track hazardous chemicals to meet Clean Air Act, Resource Conservation and Recovery Act (RCRA), Emergency Planning and Community Right-to-Know Act and Pollution Prevention initiatives. Guides consistent direction across the program areas, promotes RCRA compliance excellence, develops implementing criteria/guidance, offers technical consultation and identifies trends necessary to increase efficiencies and enhance mission capability. RRepresents the Air Force on industry, Department of Defense and other federal panels, chairs the Air Force Hazardous Material and Hazardous Waste Panel and advocates for research and development projects and regulatory/industry partnerships.

Initiatives and Developments:

- Hazardous Chemical Data Quality Initiatives. Provide actionable data to sustain data quality objectives for the Enterprise Environmental, Safety and Occupational Health Management Information System hazardous materials and waste modules to meet regulatory compliance and manage environmental aspects and impacts. Focus areas include association of material inventory to correct Safety Data Sheet information, shelf-life management and proper recording of hazardous material usage to meet regulatory reporting and risk management.
- Enterprise Efficiencies. Capitalize on opportunities to eliminate duplicative efforts for Safety Data Sheet entry and interface with logistics information technology systems to rely on authoritative procurement data.
- Proactive Risk Management. Identify mission-critical requirements for hazardous material usage to proactively manage the risk associated with new Environmental Protection Agency regulations under the authority of the Toxic Substance Control Act.
- Focused Pollution Prevention Investment Strategy. Collaborate with the Air Force Life Cycle Maintenance Center to target Pollution Prevention funds to demonstrate/validate proven technologies on weapon system platforms to address significant air and waste activities.

Hydrogeology

John Gillespie AFCEC/CZT

Program Description/Services

The program is responsible for integrating the installation's geological and hydrological natural resources into the Natural Infrastructure Asset Management Plan. Particular program emphasis is on restoration activity that takes place prior to the site remedy, such as investigation process-optimization (IP-O). This includes providing tools, resources, expertise, processes, technical information and techniques to achieve AFCEC's restoration goals.

Responsible for program guidance, policies, promotion and implementation. Manages the Conceptual Site Model Program and provides leadership for triad/rapid site characterization (RSC) and development of the initial exit strategy. The program oversees field activities, contaminant hydrogeology, analysis of emerging contaminants, natural and anthropogenic background levels, as well as provides modeling services for fate and transport, monitoring optimization and project validation.

Mission

Manage the program to provide installations with the critical natural infrastructure linkages to maximize operational land use and minimize Air Force environmental liabilities through competent technical leadership and guidance.

Vision

Ensure that asset management divisions have an effective, efficient and reliable resource to provide critical geological and hydrological consultation for an installation's natural infrastructure.

In support of the stated mission and vision, the Hydrogeology program has five primary objectives:

- Mentor, train, and guide Air Force project managers and asset management environmental professionals.
- Provide conceptual site model services and oversight.
- Serve as AFCEC's technical authority for IP-O.
- Advise the civil engineering career field program on mentoring, training, education, recruitment, retention and professional registration opportunities.
- Support Air Force and Department of Defense leadership on geology and hydrology matters.

How to get Services

- Program resources can be accessed by contacting John Gillespie at AFCEC/CZTE

Installation Planning

Amy Vandeveer, AICP, AFCEC/CP

Vision:

To provide an agile and adaptable framework for Air Force installation planning by adopting contemporary planning principles in sustainable development, form-based planning and resource conservation to achieve the Air Force's vision for sustainable, right-sized installations. To leverage the planning process as a decision support tool to ensure mission sustainment today and in the future.

Scope:

The Installation Planning program is comprised of policy, guidance and technical assistance for installation development. The program provides tools, technical information, techniques and procedures to achieve sustainable installations to perform assigned missions with the right balance of new development, redevelopment, environmental protection and innovative change. The planning SME provides technical services to Department of Defense, Air Staff, major command and installation planners, ensuring success of the installation development program. Represents the Air Force before DoD services, public agencies, industry and installation planning stakeholders. Coordinates with the career field manager for mentoring, training, education, recruitment, retention and professional certification opportunities for Air Force community planners.

Initiatives and Developments:

- Integration of Air Force strategic guidance into installation development principles and practice.
- Deployment of the Comprehensive Planning Platform, a digital installation-level planning product to utilize data for real-time decision-making and document decisions in the planning process.
- Utilize the principles of form-based code to develop an agile and responsive planning framework to ensure sustainable planning principles are incorporated into known and future planning actions.
- Integrate activity management into the process of identifying requirements and honing investment strategies for future installation development.
- Develop standard planning products and processes to bridge the gap from installation-wide planning to requirement-specific planning to ensure a proper timeframe for planning.
- Leverage the data and information inherent in the installation planning process to support planning across installations in processes such as strategic basing and new weapon system bed-down.
- Increase opportunities for professional development and American Institute of Community Planner certification for installation planners.

Life Cycle Cost Engineering

Blaine Benson, P.E., LEED AP BD+C, PMP, CCE, AFCEC/COS

Vision:

Provide training and guidance for Air Force personnel performing cost estimating for facility construction and renovation projects. Enable cost personnel to prepare more accurate estimates in accordance with Department of Defense and industry standards.

Scope:

Delivers guidance on detailed cost estimating, economic analysis, life cycle costing, plant replacement value, area cost factors, requirement and management plans and cost modeling. The program covers military construction project programming, design and construction cost estimating to facility sustainment, restoration and modernization (SRM) forecasting. Researches requirements and develops tools for infrastructure and facility systems; participates in development of non-Air Force (e.g. DoD, commercial) criteria with potential impacts to cost engineering programs; and reviews existing programs for Air Force direction. Represents the Air Force on the DoD Cost Engineering Discipline Working Group, the Tri-Service Automated Cost Engineering System (TRACES) committee and the Tri-Services Cost Engineering Certification Board.

Initiatives and Developments:

- Development of the TRACES portal and new cost engineering tools such as "TRACES Parametric."
- Major updates and revisions to Unified Facilities Criteria 3-701-01 to include updating area cost factors.
- Implementation of the to-be-published Air Force Guidance Memorandum on the cost estimating improvement program (CEIP).
- Development of refresher cost estimating classes in conjunction with the Air Force Institute of Technology as part of the CEIP.
- As part of the CEIP, finish the two-year trial of a proposed reviewer/approval (R/A) program to verify military construction (MILCON) and selected SRM project cost estimates for thoroughness and accuracy.
- Brief results of the trial R/A period to the civil engineer board for a R/A implementation decision.

Life Health Safety Engineering

Raymond N. Hansen, P.E., AFCEC/COS

Vision:

Air Force will lead the nation in criteria in life, health and safety for facilities and personnel.

Scope:

Serves as the lead consultant for Life-Health-Safety engineering issues and recommends policy, provides guidance and coordinates the exchange of information. Supports mission continuity and provides operational and maintenance guidance in the areas of fire protection and facilities, implementation of public laws, child and youth facilities certification and accreditation, and specialized protection and facility systems, including nuclear weapons generation and storage areas, water mist fire suppression systems, electronics facility protection, simulators and training systems. Supports fire protection for special electrical systems and storage batteries, personnel housing, construction safety, fall protection interfaces, carbon monoxide systems and mass notification systems. Principal member of several national consensus code and standard committees.

Initiatives and Developments:

- Working major updates and revisions to UFC 3-600-01, Fire Protection Engineering for Facilities.
- DoD lead for updating UFC 4-021-01, Design and Operations and Maintenance (O&M): Mass Notification Systems.
- Converting and updating information in UFC 4-740-14, Design: Child Development Centers into a new facilities criteria.
- Published FC 4-420-07F, Nuclear Weapons-Capable Maintenance and Storage Facilities.
- Through design and fire hazard analysis reviews, ensures weapon generation facilities are safe and support mission requirements.
- Development of DoD inspection guides for child and youth facilities.

Mechanical/HVAC

Thomas A. Adams, P.E., CCE, AFCEC/COS

Vision:

Provide design guidance and standardize Air Force mechanical/Heating, Ventilation and Air Conditioning (HVAC) systems so life-cycle cost effective facility mechanical systems are installed in all new facilities and major renovations. Provide tools and expertise to the field.

Scope:

Addresses technical issues related to facility mechanical systems, including air conditioning, heating, distribution systems, compressed air and ventilation systems/equipment. As Air Force member of the Mechanical Engineering Discipline Working Group, develops, updates and interprets primary design and O&M UFC. Provides draft language for Air Force Instructions and other Air Force publications. Performs engineering analyses of system performance and uses results to adopt applicable design provisions from industry guidance documents such as American Society of Heating, Refridgerating and Air-Conditioning Engineers (ASHRAE) and American National Standards Institute (ANSI) Standards. In addition, builds software analysis tools to assist mechanical engineers in the field and notifies higher headquarters of potential mission impacts due to new/revised regulatory burdens and finds alternatives to mitigate negative effects. Provides technical guidance to the field via CE DASH, AFCEC's Reachback Center or through articles in AFCEC publications.

Initiatives and Developments:

- Developed computer-based HVAC Load Estimation tool using the Heat Balance Method as described in ASHRAE Fundamentals Handbook; will publish in CE DASH.
- Embedded a "psychrometrics" calculator within a Microsoft Excel file to help facility mechanical engineers with HVAC design, analysis and troubleshooting – posted to CE-DASH.
- Developed method to accurately size ventilation systems for fume mitigation in hangars, warehouses and large maintenance bays.
- Completed a variable refrigerant flow (VRF) cost study through the Army's Construction Engineering Research Laboratory (CERL) — examined capital and maintenance costs of existing DoD VRF systems – CERL briefed at Energy Exchange.
- Posted VRF FAQ (frequently asked questions) document on CE-DASH.
- Determined additional fuel requirements for Eielson Air Force Base, Alaska, cogeneration plant to increase electrical output to meet F-35 bed-down requirements.

Natural Resources Management

Kevin Porteck, Natural Resources Specialist, AFCEC/CZT

Vision:

Air Force installation lands support a resilient natural infrastructure capable of sustaining military mission requirements now and in the future.

Scope:

The natural resources management program develops and implements installation integrated natural resources management plans (INRMPs) in consultation with other federal and state regulatory agencies. INRMPs focus on sustaining an installation landscape well-suited for military testing and training activities while ensuring compliance with all environmental protection laws. Supports planning, programming, budgeting and execution of natural resources requirements, to include wildlife management, forestry, wetland conservation, agricultural leasing, wildland fire management and projects to resolve issues related to threatened and endangered species conservation and the protection of sensitive natural resources. Represents the Air Force on a variety of DoD and federal agency working groups and chairs the Air Force Natural Resources Panel.

Initiatives and developments:

- Cooperative agreements were utilized with other federal and state agencies as an efficient means to execute land management tasks at Air Force installations.
- Oversees revenue-generating conservation programs, which include agriculture leases, timber sales and permits for hunting and fishing. Proceeds are distributed back to installations to support implementation of INRMP.
- Surveys were completed on 55 installations to detect bat species present, to include species protected by the Endangered Species Act. To ensure that protected bats are not affected by construction and demolition activities, acoustic bat monitors were used to detect the unique sounds emitted by different bat species that are present in the vicinity.
- Prescribed burns are conducted on over 110,000 acres annually to prevent severe wildfires from mission activities and support a more fire-resilient ecosystem.

Operations

Bryan Muller, AFCEC/COO

Vision:

Enable enterprise-wide operations flight maintenance management effectiveness through standardized work requests, work execution, materiel support and contract service delivery. Develop standard process management metrics leading to an enterprise operations management dashboard. Improve in-house operations work scheduling to effectively aid decision-making with respect to work acceptance and estimated start dates based on overall capacity to perform work.

Scope:

The Operations Maintenance program provides guidance, through standard business processes, governing the full lifecycle of effective infrastructure and facility maintenance management from work request receipt, prioritization, shop scheduling and labor reporting, materiel procurement, contracted service delivery and work closeout. The subject matter expert (SME) interfaces with real property and cost accounting program managers ensuring work task cost accumulation, capitalization and reimbursable customer cost accounting complies with chief financial officer (CFO), financial improvement and audit readiness (FIAR) and general accounting practices. Provides guidance to the preventive maintenance program and development of Air Force unique procedures. Data analysis reveals best practices, comparisons to industry trends and standards and informs sustainment and operations funding. Is the operations functional lead to the furnishings management office (FMO) for NexGen-related information technology programs, including application functionality and interface development to other systems using operations data.

Initiatives and Developments:

Continued improvements were made to operations work management standard operating procedures, guidance and training. Air Force Instruction (AFI) 32-1001, Operations Management, was extensively updated to include asset management foundations, improved facility manager program guidance, temperature set-points, activity management plan (AMP) and sub-AMP guidance and merged snow control/asbestos management/corrosion control/roofing AFI content (release expected early 2019). Playbooks for work management and preventive maintenance (PM) were extensively updated by the Air Force Civil Engineer Center (AFCEC)/chief operating officer (COO) team in FY18. AFCEC/COO visited bases to engage with NexGen users to share lessons learned, review business process fundamentals and capture field validated concerns with the system. A SharePoint site provides extensive TRIRIGA support information and active discussion forums. Future workshops are planned along with development of a mobile education and training capability to assist bases with fundamentals of work management, materiel control and preventive maintenance processes, review of current guidance and training on supporting process management tools. Efforts are underway to deliver improved data collection and integration for improved user field experience and more proactive decision-making.

Overseas Environmental

Steffanie K. Metzger, P.E., AFCEC/CZT

Vision:

The Air Force Overseas Environmental Program sustains and promotes sound environmental performance in Air Force operations to meet our overseas missions.

Scope:

Provides guidance and direction for sustaining and promoting sound environmental performance in Air Force operations to meet overseas missions in air, space and cyberspace. Provides critical input in the development of Department of Defense and Air Force overseas environmental policy and guides the overseas environmental community to ensure sustained compliance with applicable regulations. With the proponent and overseas points of contact, informs officials of pertinent environmental considerations when authorizing or approving certain major DoD actions which may cause significant harm to the environment of the global commons, the environment of a foreign nation or a protected global resource. Additionally, seeks to support non-enduring locations in a manner that sustains DoD national defense missions and minimizes environmental risks.

Initiatives and Developments:

- Accomplished Audit Assertion for Environmental Corrective Action Sub-Assessable Unit. Provided accurate reporting of all environmental liabilities overseas.
- Maintained awareness of host nation regulatory climate. Contracted for and finalized the development of updated environmental legislative reviews for Japan and South Korea.
- As a member of the Office of the Secretary of Defense Working Group, drafted the first ever contingency location environmental standards.
- Participated in regional program management reviews.
- Developed standard operating procedures for the Overseas Remediation Program, conducted program requirements development (PRD) training and completed the PRD process to identify all overseas remediation requirements through cost-to-complete.

Pavements

Craig Rutland, Ph.D., P.E., AFCEC/COS

Vision:

Facilitate and advance pavement siting, design, construction, evaluation, maintenance, repair and management knowledge, tools and capability to cost-effectively sustain Air Force mission requirements.

Scope:

Delivers guidance on design, construction, evaluation, operation, maintenance, repair and management of pavements. Provides design and management aids, consultation, and research of pavement performance issues. Provides training on airfield pavement design as well as project quality control and assurance. Orchestrates research among numerous labs to develop and advance state-of-the-art pavement materials, equipment and methods. Guides the research, development, test and evaluation of airfield damage repair solutions, promotes training opportunities and develops standards, criteria and specifications. Works with other military services, Federal Aviation Administration, Federal Highway Administration (FHWA), industry representatives and North Atlantic Treaty Organization (NATO) to develop common standards. Chairs the Tri-Service Pavements Design Working Group and NATO Airfield Pavement Team and is a member of the Transportation Research Board. Assists the Transportation Network Activity Management Plan and sub–AMP champions with integrated priority list development.

Initiatives and Developments

- The FHWA Manual of Uniform Traffic Control Devices requires an implementation assessment and management system to ensure vehicle traffic signs comply with and are maintained at new retro-reflectivity standards. Currently developing a smart phone capability with the Engineer Research and Development Center to measure retro-reflectivity.
- Some European countries are designing pavement sub-base and base courses for 75-year life span with surfaces designed for 50-year. Asphalt surfaces are milled and overlaid every 15 to 20 years. We are currently reviewing for Air Force impacts.
- States and municipalities are increasing use of asset and activity management techniques to manage the transportation network, mandated by Moving Ahead for Progress in the 21st Century Act legislation. We are reviewing to see what can be included in the Air Force pavement asset management program.
- Pavement preservation techniques and practices are becoming prevalent and are consistent with the Air Force asset management approach. Additional guidance is being developed on pavement preservation.
- Surface treatments under MV-22 nacelles are required to mitigate damage from heat and petroleum, oils and lubricants. Currently evaluating treatment performance to improve pavement sustainment.

Pest Management

Donald A. Teig, AFCEC/COS

Vision:

Provides superior pest and disease vector management for the Air Force to meet global mission requirements. Ensures forward-deployed pest management personnel are trained and equipped to manage insects, weeds and wildlife that pose a safety or disease/non-battle injury risk to Airmen.

Scope:

Recommends policy, provides guidance and coordinates the exchange of information on all matters related to pest and grounds management throughout the Air Force. Guidance and program reviews ensure environmentally sound and effective programs are present to prevent pests and disease vectors from adversely affecting operations and grounds maintenance contracts, and pest management operations meet Department of Defense and Air Force standards. Develops policies and procedures for effective aerial spraying programs to manage arthropod disease vectors and invasive species that impact health, safety and homeland security. Interacts with Flight Safety and installations to mitigate bird andwildlife aircraft strike hazards related to vegetation, insects and vertebrate pest management on airfields. Represents the Air Force on the Armed Forces Pest Management Board.

Initiatives and Developments:

- Established new methods, materials, and training for aircraft disinsection to prevent the spread of invasive pests and vectors of disease.
- Partnered with range management personnel to create fire breaks for bombing ranges by eliminating invasive weeds using aerial herbicide application to prevent wildfires.
- Updating integrated Pest Management Dashboard on CE DASH to track pesticide certification, installation pest management program reviews and installation pest management plans, as well as provide a central platform for policy guidance.
- Merging pesticide tracking and reporting into the Enterprise Environmental Safety and Occupational Health-Management Information System database to provide uniform, secure, centrally managed processes for pest management worldwide.
- Partnering with U.S. Department of Agriculture and university experts to develop chemicals, pheromones and biological control methods to manage invasive species such as Brazilian pepper trees and paper wasps.

Project Management

Carlton H. Hendrix, P.E., PMP, AFCEC/CF

Vision:

Optimize project management through continuous evaluation and improvement of practices, procedures and adequate training of Air Force project managers.

Scope:

Advances Air Force project management through development of improved policies and procedures to optimize and standardize project management practices across the enterprise. Works to continually improve Air Force project management by incorporating emerging and industry-wide standard practices. Responsible for standardizing work practices; establishing performance metrics; evaluating and implementing, as appropriate, Department of Defense and industry best practices; developing and executing a project management training program; and maintaining the Air Force Design and Construction Project Management Guide. Develops, maintains and serves as manager of an Air Force Project Management certification program, and partners with the Air Force Civil Engineer Career Program to provide advice on the recruitment and development of project managers.

Initiatives and Developments:

- Capturing and organizing Air Force project management corporate knowledge base and making it accessible through CE DASH.
- Providing objective and standardized tools to improve performance across all phases of the project management lifecycle.
- Developing and maintaining a robust Air Force project management training program.
- Partnering with Air Force Institute of Technology and other research entities to advance the practice of project management within the Air Force.

Ranges

Jon Haliscak, AFCEC/CZT

Vision:

Facilitate and advance sustainability of all Air Force ranges supporting warfighter testing and training requirements and make former ranges safe for future use. Support land withdrawal renewals and expansions for Nevada Test and Training Range, Barry M. Goldwater Range, Arizona, and Juniper Butte Range, Idaho, to support/enhance future test and training requirements.

Scope:

The Range Program has two focus areas: Operational Range Sustainment and Military Munitions Response Program. Both areas are multifaceted. Responsibilities include providing tools, resources, expertise, processes, technical information and techniques to achieve the diverse goals of both programs. Responsible for review and comment on policies and guidance from the Office of the Secretary of Defense (OSD) and Secretary of the Air Force and for providing technical support to air staff, major commands and installations as required. Represents the Air Force on OSD working groups. Oversees much of the Operational Range Sustainment initiative, including the annual data call from OSD and Operational Range Assessment Program, and provides input to the Air Force Restoration Program Management Office concerning the munitions response program.

Initiatives and Developments:

Currently supporting the Land Withdrawal Renewal and proposed expansion for Nevada Test and Training Range, which expires in 2021, and the Barry M. Goldwater Range which expires in 2024, to facilitate long-term test and training requirements. Also currently rewriting the Air Force Operational Range Assessment Program (ORAP) roles and responsibilities document, to be called ORAP Version 4.0. Other initiatives include the standardization of ORAP deliverable formats to include read-ahead packages/technical approaches, trip reports, report formats and operating procedures.

Real Property and Asset Management

H. LaKenya Sartin, AFCEC/CI

Vision:

Maintain real property mission support to acquire, maintain and dispose of Air Force real property and interests while enhancing real property guidance, training and policies to improve the accountability and sustainment of real property assets across the enterprise. The Air Force Civil Engineer Center's Installations Directorate provides front-door access for all real property-related matters by providing direct installation support for both real property transactions and accountability.

Scope:

The Real Property Transactions program provides a strategically structured approach to acquire, manage and dispose of Air Force real property including land, facilities and real estate instruments. Is the real property focal point, responsible for accountability and sustainment development, real estate instruction, policy development, governance oversight, training and overall management of the program to meet Air Force and Department of Defense goals and directives. Provides expert consultation and guidance on real property accountability methods and procedures; coordinates policy and procedures with the Air Force auditor general, DoD inspector general, Air Force general counsel, General Accounting Office and other entities; prepares congressional testimony for senior Air Force officials related to real property matters; and represents and leads numerous integrated planning teams, interservice and interdepartmental committees, task forces and working groups related to real property management, accountability and utilization.

Initiatives and Developments:

- Freeze Air Force footprint: Minimize acquiring General Services Administration leases; dispose of Air Force real property and real property interests that are no longer required to support current or projected missions.
- DoD financial audit: providing analysis, recommendations and information concerning Air Force real property audit activities; provides audit assertion liaison touchpoints; ensures installations continue monthly corrective action plans to meet audit compliance; and reports and provides audit assertion guidance and training.
- Creating an enterprise-wide training program to minimize data loss during NexGen IT rollout.
- Continual review of standardized Air Force real estate templates (RET), delegations of authority and RET Playbook.
- Increasing real estate training opportunities by creating Air Force Institute of Technology-based basic real property training; updating and improving AFIT 424 Real Property Management and Advanced Realty courses; and providing virtual real property training sessions.

Remedial Systems

Kent C. Glover, Ph.D., AFCEC/CZT

Vision:

Promote good remediation engineering and science practices and provide remediation technology expertise and consultation to Air Force installations and the Environmental Restoration Program (ERP) to minimize environmental liabilities and site restoration footprint.

Scope:

The Remedial Systems Technical Program provides expertise, knowledge and technical advice for remedy selection, implementation, performance evaluation and optimization within the ERP. Focuses resources on remediation technology needs of long-term complex and emerging contaminant sites and enhances visibility/training of remediation technology across the Air Force civil engineer community using web-based resources, presentations and publications. In addition to consultant and technology-transfer services, develops or recommends criteria, standards and directives to air staff, major commands, installations and contractors. Identifies and addresses technology demonstration, validation and development needs of the Air Force CE community relating to environmental remedial systems. Represents the Air Force regarding remedial systems issues on committees and technical forums with other DoD services, other federal and state agencies, and industry.

Initiatives and Developments:

- Critical process analysis (CPA) provides detailed analysis of remedy performance at sites with high costs, risks and complexity. Triggers management action before problems are critical. Evaluates remedy effectiveness for 12-16 sites per year.
- Complex sites initiative (CSI) updates remedial strategies, reduces uncertainty/costs with state-of-art technology and alternate remedies and clarifies contract requirements for sites with high costs, risks and complexity.
- Technology transfer emphasizes lessons learned from CPAs and CSIs, field-scale demonstration and validation of remediation technologies for emerging contaminants, and application of innovative tools and methods for high-resolution site characterization and source-zone remediation.
- Service to Federal Remediation Technology Roundtable as steering committee member and 2017-2018 chair. Thisenhances visibility of ERP successes and provides valuable interagency collaboration on remediation technology challenges.
- Interagency technical working groups (TWGs) provide forums for regulatory collaboration at complex sites where remedial progress has stalled. Recent TWGs at Edwards Air Force Base, California, Air Force Plant 4 at Fort Worth, Texas, Ellsworth AFB, South Dakoka, Kirtland AFB, New Mexico, and Altus AFB and Tinker AFB in Oklahoma, are providing substantial benefits to remediation progress.

Renewable Energy and Energy Resilience

Mike Rits, P.E., CEM, AFCEC/CNR

Vision:

Enable the Air Force to meet its critical mission requirements with cost-effective and resilient energy (and other CE commodities) and infrastructure systems.

Scope:

As the Air Force moves to strengthen its facility energy assurance posture, renewable energy investment opportunities can be a force-multiplier in structuring the means to provide additional resilience to the critical mission utility infrastructure. Installation energy master plans should identify single-point vulnerabilities as well as opportunities to enhance energy resilience in support of the mission. Microgrids, alternative redundant energy production and storage, often can be enhanced with renewables, especially ones that reliably produce power when needed. In coordination with the Office of Energy Assurance, the Energy Surety and Electrical SMEs, the Air Force is developing a comprehensive approach to bolstering energy assurance to meet mission needs across the enterprise.

Initiatives and Developments:

- Encouraging bases to conduct emergency management utility outage exercises to test systems and processes that support the mission and develop lessons learned.
- Developing a template for community partnerships that enhances base and community resilience to a long-term electric grid outage.
- Assisting bases to assess energy resilience requirements or gaps to support critical missions.
- Supporting initiatives of the Office of Energy Assurance.

Roofing and Asbestos Abatement

Clayton Deel, P.E., AFCEC/COS

Vision:

Optimize Air Force roof life-cycle costs to effectively protect assets and minimize risks to mission.

Scope:

Delivers guidance on facility roofing systems, maintenance and inspection practices Air Force-wide. Develops and updates performance planning, design and construction criteria for Air Force facility roofs and maintenance and inspection criteria. Helps bases through technical consultation and represents the Air Force on tri-service discipline working groups. Evaluates new technologies for facility systems components. Included roof types are built-up roofing, modified bitumen, thermoselastic and thermoplastic single-ply, liquid applied, metal, shingle and tile roofing systems. Additionally, advises when the rooftop is used as a platform to install photovoltaic panels, to install vegetative green roofs and other initiatives that might distract from the primary purpose of the roof to protect the facility and its contents.

Initiatives and Developments:

- Roof Condition Assessments: pursuing contracts to conduct thermographic imagery of an entire installation's low-sloped roofs to validate condition inspections and enable accurate scoping of necessary repairs.
- Working with Air Force Installation Contracting Agency to develop a revised continental U.S. roofing repair and maintenance indefinite delivery/indefinite quantity contract.
- Transfer any necessary requirements in Air Force Instruction (AFI) 32-1051 Roof Systems Management to an appropriate publication prior to its rescission.
- Transfer any necessary requirements in AFI 32-1052 Facility Asbestos Management to an appropriate publication prior to its rescission.
- Updating and developing content in CE DASH, an online reference tool providing references, workspaces and reach-back support.

Structural and Geotechnical Engineering

Charles Ishee, Ph.D., AFCEC/COS

Vision:

Represent the Air Force in all aspects of structural and geotechnical engineering to promote and sustain design excellence of Air Force facilities.

Scope:

The Structural and Geotechnical Engineering SME provides Air Force-wide guidance on facility geotechnical and structural design. Interprets and contributes to the development of design criteria for Air Force facilities, offers geotechnical and structural engineering technical consultation, provides structural engineering experience and represents the Air Force on the tri-service Geotechnical and Structural Discipline Working Groups to develop consolidated Department of Defense engineering standards and criteria. The geotechnical and structural engineering programs are wide-ranging, covering conventional facility design, seismic engineering and structural hardening. Serves as the seismic safety coordinator for the Air Force and assists with the bridge inspection and dam inspection programs.

Initiatives and Developments:

- Combine Unified Facilities Criteria (UFC) 3-301-01, Structural Engineering, and UFC 3-310-04, Seismic Design for Buildings, into a single UFC, with Risk Category V facilities covered in a separate UFC document.
- Update wind design speeds and tsunami inundation mapping for outside continental U.S. installations consistent with design methodology in American Society of Civil Engineers (ASCE) 7-16.
- Revise UFC 4-023-03, Design of Buildings to Resist Progressive Collapse, to coordinate with the upcoming release of ASCE Standard and Guide for Disproportionate Collapse.
- Develop plan to meet requirements in International Existing Building Code pertaining to roof repair projects in high-wind locations.
- Develop Air Force seismic program and technical resolution of seismic issues per Executive Order 13713.
- More clearly define airfield frangibility criteria consulting with the Federal Aviation Administration and the International Civil Aviation Organization.

Sustainable Design and Development

Paula S. Shaw, P.E., LEED AP, AFCEC/CF

Vision:

To lower the total ownership cost of Air Force facilities by designing and constructing buildings in such a way as to reduce the resources they consume, reduce the waste they generate and maximize the benefits they provide in support of the mission.

Scope:

The Air Force lead in defining and conceiving programs and projects to advance state-of-the art sustainable technologies and methodologies. Provides professional consulting services to engineers and architects during all phases of the project delivery process to ensure compliance with federal, Department of Defense and Air Force sustainability mandates, policy and goals. Reviews and comments on new regulatory requirements and keeps abreast of the latest technologies. This allows an active role in refreshing, shaping and implementing DoD and Air Force policy, initiatives and guidance. Additionally, provides gap analyses to guide investment and participation in demonstration, validation and technology transfer of emerging and off-the-shelf sustainability solutions to ensure current and future mission needs are met.

Initiatives and Developments:

- Supporting the Air Force transition from using U.S. Green Building Council (USGBC) Leadership in Energy and Environmental Design as the third-party certification system for projects pertaining to new buildings and renovations of existing buildings, to using the DoD version of either the USGBC Guiding Principles Assessment or the Green Building Initiative Guiding Principles Compliance system.
- Revising Unified Facilities Criteria 1-200-02, High Performance and Sustainable Building Requirements; and converting Unified Facilities Guide Specifications 01 33 29, Sustainability Reporting to a design/build and design/bid/build document.
- Revamping the Air Force Institute of Technology sustainability course to align with new Air Force third-party certification requirements.
- Advancing the demonstration and validation of innovative technologies on DoD installations as a member of the Installation Energy and Water Technical Committee of the Environmental Security Technology Certification Program.
- Exploring the potential to establish federal High Performance and Sustainable Buildings guiding principles equivalencies with local standards and codes for outside continental U.S. locations in Germany and the United Kingdom.

Toxicology and Risk Management

Samuel L. Brock, D.V.M., M.P.H., AFCEC/CZT

Vision:

Implement defensible exposure assessments and toxicity values supporting restoration management and optimize environmental remediation risk at 800 technically complex sites.

Scope:

The Toxicology and Risk Management program provides guidance, consultation and technical contract oversight support to achieve excellence in environmental risk assessment. Focuses on providing tools, processes, techniques, technical information resources and training. Responsible for program guidance, outreach and enactment, and supports planning, implementation and policy development. Serves as the Air Force Civil Engineer Center's technical authority for toxicology and risk assessment practitioners, and supports the environmental restoration program review of risk assessments and emerging contaminants. Supports Air Force and Department of Defense leaders on toxicology and risk assessment matters; coordinates with career field managers on recruiting, mentoring, training and retaining staff, provides professional registration opportunities, and represents the Air Force on tri-service and interagency workgroups.

Initiatives and developments:

- Developed thermal treatment process to remove pesticides from soil, saving project waste-management costs, and standardized methodology for application across the Air Force.
- Collaborated with U.S. Geological Survey Biological Group and U.S. Fish and Wildlife Service to complete studies determining lead exposure to wildlife on small arms ranges.
- Developed site remediation evaluation tools to assess remediation progress and determine next-phase contract requirements for 200 of the most difficult Air Force remedial sites.
- Led development of the Long-Term Management of Complex Sites chapter in the Interstate Technology and Regulatory Council (ITRC) Remediation Management of Complex Sites Guidance, published Nov. 1, 2017.
- Developed national, web-based training by ITRC on Remediation Management of Complex Sites.
- Developed tool to evaluate and monitor progress of remediation at environmental sites.
- Standardized and implemented guidance for toxicology group performance metrics and individual professional development.

Utility Rate Management Team (URMT)

Nancy M. Coleal, P.E., CEM, AFCEC/CNR

Vision:

Identify beneficial solutions to provide utilities to Air Force installations. Optimize solutions to economic, engineering, contracting, legal and planning issues that affect the acquisition and management of utility services to obtain quality, reliable utility service with fair, reasonable and nondiscriminatory rates consistent with mission requirements, resulting in the lowest total cost to the Air Force.

Scope:

An electrical engineering professional providing expert guidance to installations worldwide on utility rate issues and contract acquisition for electric, natural gas, water and wastewater utilities. The URMT provides technical support and negotiates on behalf of Air Force contracting officer and base civil engineer customers to assist installations in procuring utility service at a fair price with reasonable terms and conditions. The Air Force liaison to federal power authorities. The partnership has demonstrated savings of $50 million a year by jointly managing and optimizing federal preference hydropower allocations. The URMT assists with reviewing terms in new/renewing utility service contracts, analyzes utility invoices to optimize and validate appropriate rates, and represents installations during discussions/negotiations with utility companies and state regulatory bodies to identify savings opportunities.

Initiatives and Developments:

- Proactively conducting utility acquisition assessments at all continental U.S. bases since 2007.
- Optimizing Western Area Power Administration (WAPA) federal preference hydropower benefits at 18 bases.
- Negotiating new contracts with WAPA to buy additional power at those bases, saving resources.
- Publishing a quarterly rate monitoring and on-the-job training newsletter, summarizing regulatory issues impacting the Air Force, national and regional policies, and market trends and indicators.
- Assisting bases with new and renewing utility contracts and reviewing rate increases (contract modifications).
- Developing a template for utility company partnerships that enhance base and community resilience to a long-term electric grid outage.
- Assisting bases to assess their energy resilience requirements or gaps to support their critical missions.
- Optimizing the technical aspects of utility contracts, providing inputs and recommendations to installation decision-makers.
- Troubleshooting regulatory hurdles.

Water Quality

Kevin Leachman, P.E., AFCEC/CZT

Vision:

The Water Quality Program supports Air Force engineers and environmental professionals accomplish the Air Force missions and fully comply with all Clean Water Act (CWA) and Safe Drinking Water Act (SDWA) requirements.

Scope:

The Water Quality Program provides capabilities to reduce environmental risk for drinking water and wastewater programs across the Air Force. Guides compliance with the CWA including stormwater, wastewater and pretreatment permitting issues, as well as fuel tank compliance. For SDWA compliance, tracks and provides guidance for compliance of Air Force drinking water systems. Participates in Department of Defense panels, including the CWA Services Steering Committee and the SDWA Services Steering Committee. Co-chairs the Air Force Water Program Panel to lead integrated solutions and strategic planning for Air Force water programs in conjunction with cross-functional stakeholders from Air Force civil engineering, operations and programming, as well as Air Force medical and legal communities.

Initiatives and Developments:

- Collaborate with cross-functional Air Force Water Program Panel to develop Air Force strategic plan for water systems with respect to engineering/operations, drinking water health and environmental risk.
- Natural Infrastructure Asset Management Program — Cross functional outreach to bridge gap between non-compliance and non-environmentally funded solutions.
- Promote increased awareness and capabilities through Air Force Institute of Technology courses, webinars and consultations.
- Advocate for effective programs and feedback for rule-making actions through the CWA and SDWA Services Steering Committees.
- Asset Visibility Process Improvement Working Group: Improve Air Force data quality by reconciling duplicative data systems to reduce data collection burden and provide consistent and authoritative data.
- Collaborate with other Air Force panels and Air Force stakeholders regarding emerging contaminants in drinking water and wastewater and impact on future compliance and Air Force policy.
- Provide technical analysis of legal and policy developments for CWA, SDWA and Resource Conservation and Recovery Act subtitle I (underground storage tanks).

Water/Wastewater, Civil

John D. Bishop, P.E., AFCEC/COS

Vision:

Provides updated guidance so base water and wastewater system operators properly operate and maintain their systems and helps the operators resolve complex issues supporting mission requirements. Evaluates new technologies enhancing Air Force capabilities while maintaining mission integrity. Supports Air Force enterprise through collaboration with other Department of Defense proponents to standardize means and methods to reduce redundancy and increase efficiency.

Scope:

Provides oversight, consultation and guidance on water and wastewater system lifecycles to manage and operate these systems efficiently and effectively. Develops and updates civil planning, design, construction and operations and maintenance criteria as a member of the DoD Civil Discipline Working Group and helps bases and design agents apply these DoD and industry standards and criteria. Coordinates with the career field manager on mentoring, training and education of Air Force water and wastewater engineers, and water and plumbing shop personnel. Is a member of the Water Environment Federation, the American Water Works Association's desalination committee.

Initiatives and Developments:

- Utilities infrastructure: Assists in targeting the funding needs for base water-related utility replacement and repair projects with established Air Force policies.
- Bases' manpower and maintenance priorities: Assists in identifying base manpower requirements to ensure sufficient resources are being applied to required maintenance practices.
- New technology applications, linear segmentation and sustainment management systems: Supports the development and implementation of new technological applications to improve the Air Force's capabilities to maintain our bases' infrastructure.
- Promotes training and expertise development in the water and wastewater subject area at base level to increase the knowledge center to improve operations and maintenance capacity.
- Content development for CE DASH, an online reference tool providing references, workspaces and reach-back capability for the CE enterprise.

Who's who in civil engineering

Command Chiefs with civil engineer background

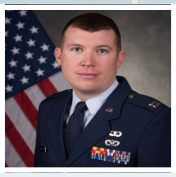
Name	Unit	Location
Chief Master Sgt. Brent Sheehan, Command Chief Master Sergeant	354th Fighter Wing	Eielson AFB, Alaska
Chief Master Sgt. Leon Calloway, Command Chief Master Sergeant	29th Air Refueling Wing	McConnell AFB, Kansas
Chief Master Sgt. Gary Szekely, Command Chief Master Sergeant	36th Wing	Andersen AFB, Guam
Chief Master Sgt. Emilio Hernandez, Command Chief Master Sergeant	73rd Air Base Wing	Robins AFB, Georgia
Chief Master Sgt. Jerry Williams, Command Chief Master Sergeant	U.S. Air Forces Central Command	Shaw AFB, South Carolina
Chief Master Sgt. Brett Rogers, Command Chief Master Sergeant	352nd Special Operations Wing	RAF Mildenhall, United Kingdom
Chief Master Sgt. Heath Tempel, Command Chief Master Sergeant	435th Air Ground Operations Wing	Ramstein AB, Germany
Chief Master Sgt. Brion Blais, Command Chief Master Sergeant	Air Force Installation and Mission Support Center	JB San Antonio-Lackland, Texas
Chief Master Sgt. Daniel Simpson, Command Chief Master Sergeant	93rd Air Ground Operations Wing	Moody AFB, Georgia
Chief Master Sgt. Alvin Dyer, Command Chief Master Sergeant	52nd Fighter Wing	Eielson AFB, Alaska

Civilians

Name	Duty title	Location
John Bonaport Senior Executive Service	Director of Installations and Logistics	Peterson AFB, Colorado
Timothy K. Bridges Senior Executive Service	Assistant Deputy Chief of Staff for Logistics, Engineering and Force Protection	The Pentagon
Mark A. Correll Senior Executive Service	Deputy Assistant Secretary of the Air Force for Environment, Safety and Infrastructure	The Pentagon

Who's who in civil engineering

Base Civil Engineer / Deputy Base Civil Engineer

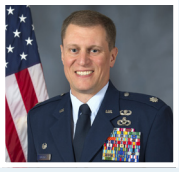


DBCE
Capt.
Brendan Dorsey-Spitz
Al Dhafra AB
380 ECES

BCE
Lt. Col.
Christopher James Wedewer
Al Dhafra AB
380 ECES

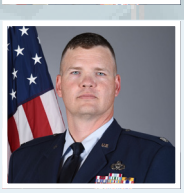
BCE
Lt. Col.
Matthew Strickler
Al Udeid AB
379 ECES

DBCE
Major
Khary Davis
Al Udeid AB
379 ECES

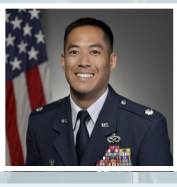


BCE
Lt. Col.
Bradly Bucholz
Ali Al Salem AB
386 ECES

BCE
Lt. Col.
Steven J. Thomas
Altus AB
97 CES

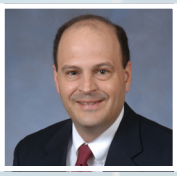


DBCE
Brian T. Drake
GS-14
Altus AB
97 CES



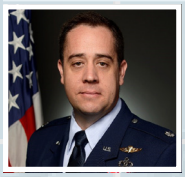
BCE
Lt. Col.
Todd T. Inouye
Andersen AFB
36 CES

DBCE
Jonathan Ostil
GS-14
Andersen AFB
36 CES



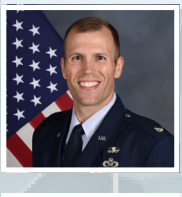
BCE
John W. Laviolette
NH-04
Arnold AFB
AEDC/TSDC

DBCE
Kristopher M. Hughes, P.E.
NH-04
Arnold AFB
AEDC/TSDC



BCE
Lt. Col.
Glenn S. Cameron
Aviano AB
31 CES

DBCE
Paul T. Bailey
GS-13
Aviano AB
31 CES



BCE
Lt. Col.
Robert C. Lance "Chris"
Barksdale AFB
2 CES

DBCE
Jeffrey K. McNeely
GS-14
Barksdale AFB
2 CES

DBCE
Calvin Gene Hendrix
GS-14
Beale AFB
9 CES

BCE
Lt. Col.
Christopher G. Eyle
Buckley AFB
460 CES

DBCE
Gregory P. Long
GS-14
Buckley A FB
460 CES

Who's who in civil engineering

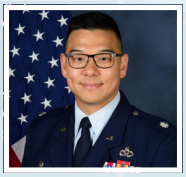
BCE
Lt. Col.
Timothy Damon Dalby
Bucley AFB
9 CES

BCE
Lt. Col.
Russel H. Gheesling
Cannon AFB
27 SOCES

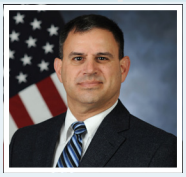
DBCE
Ronald A. Lancaster
GS-14
Cape AFB
27 SOCES

DBCE
1Lt/ O2
Robin Michael Montgomery
Cape Cod
102 CES

BCE
William "Jeff" Robertson
GS-13
Cheyenne Mountain AFS
721 CES



BCE
Lt. Col.
Peter S. Joo
Columbus AFB
14 CES

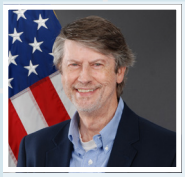


DBCE
Gus "Dino" Kirkikis
GS-13
Columbus AFB
14 CES

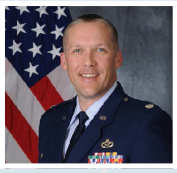
DBCE
William "Jeff" Robertson
GS-13
DAF
721 CES

BCE
Lt. Col./Commander
Vicent A. Rea
Davis-Monthan AFB
355 CES

DBCE
Michael R. Toriello
GS-14
Davis-Monthan AFB
355 CES



DBCE
Kenneth W. Williams
GS-13
Dobbins ARB
94th AW



BCE
Lt. Col.
Travis C. Guidt
Dover AFB
436 CES

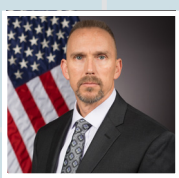
DBCE
Gina M. Lavender
GS-14
Dover AFB
436 CES

DBCE
Charles Allan Rimbach
GS-14
Dover AFB
436 MSG

BCE
Charles R. Fletcher
Dyess AFB
Lt. Col.
7 CES

DBCE
Dwain Wadlington
GS-13
Dyess AFB
7 CES

BCE
Major
Brian E. Anderson
Edwards AFB
812 CES



DBCE
Daniel T. Tufts
NH-03
Edwards AFB
812 CES

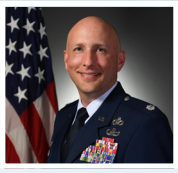
BCE
James "Jud" or "JJ" E. Judkins
NH-IV
Edwards AFB
412 CEG/CL

DBCE
Alberto "Bert" C. Cruzan
NH-IV
Edwards AFB
412 CEG/CD

BCE
Col.
John D. Schuliger
Eglin AFB
96 CEG, Commander

BCE
Major
Kelly J. Mattie
Eglin AFB
96 CES

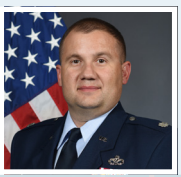
DBCE
Mark A. Schlueter
NH-04
Eglin AFB
96 CEG



BCE
Lt. Col.
Allen G. Branco III
Eielson AFB
354 CES

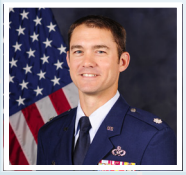
DBCE
David A Martinson
GS-14
Eielson AFB
354 CES

DBCE
Glenn A. Meyer
GS-14
Ellsworth AFB
28 CES



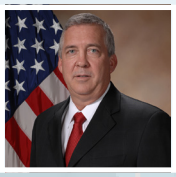
BCE
Lt. Col.
Matthew K. Anderson
Fairchild AFB
92 CES

DBCE
Ronald R. Daniels
GS-14
Fairchild AFB
92 CES

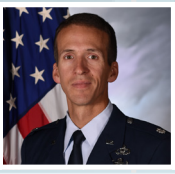


BCE
Lt. Col.
Walter L. Miller
Fresno ANGB
144 Fighter Wing

BCE
Major
Nicholas J. Anderson
Goodfellow AFB
17 CES CSS



DBCE
Michael J. Noret
GS-13
Goodfellow AFB
17 CES CSS



BCE
Lt. Col.
Matthew "Scott" Stanford
Grand Forks AFB
319 CES

DBCE
Leslie W Canarr
GS-13
Grand Forks AFB
319 CES

BCE
Thomas J. Schluckebier
NH-04
Hanscom AFB
66 CED

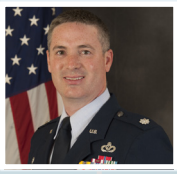
DBCE
Jerry L. Sorensen
NH-04
Hanscom AFB
66 CED

BCE
Dwain Jason Bartels II
Lt. Col.
Hill AFB
775 CES

Who's who in civil engineering

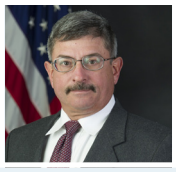
DBCE
Harry Briesmaster III
NH-04
Hill AFB
75 CEG

DBCE
Darrin J. Wray
NH-04
Hill AFB
75 CEG



BCE
Lt. Col.
Seth D. Platt
Holloman AFB
635 MMS

BCE
Lt. Col.
Joel Don Purcell
Holloman AFB
49 CES

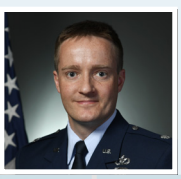


DBCE
Aydin D. Budak
GS-14
Holloman AFB
49 CES

BCE
Lt Col.
Scott W. McPherson
Homestead ARB
482 MSG/CES

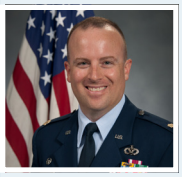
DBCE
Mark G. MacGregor
Civilian
Homestead ARB
482 MSG/CEC

BCE
Lt. Col.
Andrew E. DeRosa
Hurlburt Field AFB
823 RED HORSE

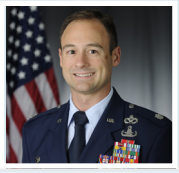


BCE
Lt Col.
Matthew K. Schroeder
Hurlburt Field AFB
1 SOCES

DBCE
Dana J. McIntyre
GS-13
Hurlburt Field AFB
1 SOCES



BCE
Major
Christopher D. Callaway
Incirlik AB
39 CES



BCE
Lt. Col.
Daniel C. Werner
JB Andrews
11 CES

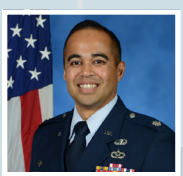
DBCE
Chad Richard Callan
GS-14
JB Andrews
11 CES

BCE
Lt. Col.
Christopher John Carnduff
JB Charleston
628 CES

DBCE
William Clarence Dean
GS-14
JB Charleston
628 CES

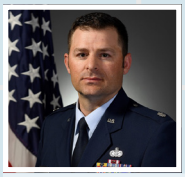
BCE
Col.
Michael Staples
JB Elmendorf-Richardson
673 CES

DBCE
Allan Lucht
GS-15
JB Elmendorf-Richardson
673 CES



BCE
Lt. Col.
Vhance Valencia
JB Elmendorf-Richardson
673 CES

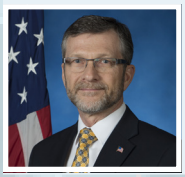
DBCE
Michael Schmidt
GS-14
JB Elmendorf-Richardson
673 CES



BCE
Lt. Col.
Jacob Leck
JB Elmendorf-Richardson
773 CES

DBCE
Daniel Barnett
GS-14
JB Elmendorf-Richardson
773 CES

BCE
Lt. Col.
Rebecca S. Corbin
JB Elmendorf-Richardson
611 CES

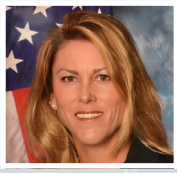


DBCE
Bruce L. Steely
GS-13
JB Elmendorf-Richardson
611 CES

BCE
Lt. Col.
Jeremy V. Oldham
JB Langley-Eustis
633 CES

DBCE
Brenda W. Cook
GS-14
JB Langley-Eustis
633 CES

DBCE
Mark J. Sciacchitano
Civilian
JB Langley-Eustis
733 CED



DBCE
Robin D. Mills
GS-801-13
JB Langley-Eustis
733 CED (part of 733 MSG)

BCE
Lt. Col.
Brian M. George
JB Lewis McChord
627 CES & Deputy Director, Public Works

BCE
Col
Aaron D. Altwies
JB McGuire-Dix-Lakehurst
87 CEG

DBCE
Christopher A. Archer
GS-14
JB McGuire-Dix-Lakehurst
87 CEG

CES
Lt. Col.
Jeffery R. Brandenburg
JB McGuire-Dix-Lakehurst
87 CES

CES Deputy Director
Linda D. Chominski
GS-14
JB McGuire-Dix-Lakehurst
787 CES

BCE
Lt. Col.
Tyrone Manegdeg
JB Pearl Harbor Hickam
647 CES

DBCE
Michael E. Schmidt
GS-14
JBER
673 CES

BCE
Brenda Roesch
GS-15
JBSA-LAK
502 CEG

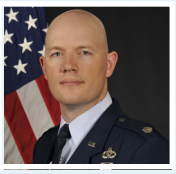
DBCE
Christian DeLaRosa
GS-14
JBSA-LAK
502 CEG

DBCE
Lt. Col.
Andrew J. Cullen
JBSA-FSH
502 CEG

BCE
Col.
Robert "Scott" Grainger
Kadena AB
18 CEG

BCE
Lt. Col.
Charles Hassell
Kadena AB
18 CES

DBCE
Jeffrey B. Noorda
GS-13
Kadena AB
18 CES

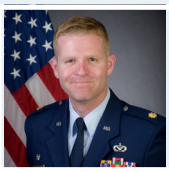


BCE
Lt. Col.
Paul Frantz
Kadena AB
718 CES

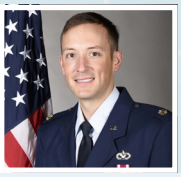
BCE
Major
Patrick Sheehan
Karshi-Khanabad AB
607 MMS

BCE
Gary J. Schneider
GS-15
Kirtland AFB
377 MSG/CE

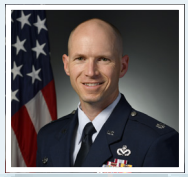
DBCE
Herbert C. "Bo" Bohannon III
GS-14
Kirtland AFB
377 CED



BCE
Major
John Paul Conner
Kunsan AB
8 CES

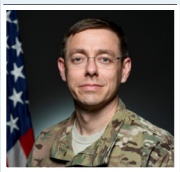


BCE
Major
Justin D. Delorit, Ph.D., P.E.
Kunsan AB
8 CES



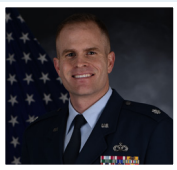
BCE
Lt. Col.
Jeffrey R. Klein
Laughlin AFB
47 CES

DBCE
Anthony "Tony" F. Gennaro, Jr.
GS-13
Laughlin AFB
47 CES



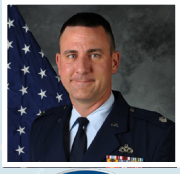
BCE
Lt. Col.
Michael Dragan Stefanovic
Little Rock AFB
19 CES

DBCE
Jennifer A. Harris
GS-14
Little Rock AFB
19 CES



BCE
Lt. Col.
Gibb Patrick Little
Los Angeles AFB
61 CELS

DBCE
A. Dave Espili
GG-14
Los Angeles AFB
61 CELS



BCE
Lt. Col.
Paul William Fredin
Luke AFB
56 CES

DBCE
Robert D. Moore
Civilian
MacDill AFB
6 CES

DBCE
Robert "Todd" Wynn
GS-14
MacDill AFB
6 CES

BCE
Col.
Jason J. Loschinskey
Malmstrom AFB
819 RED HORSE

DBCE
Major
Joshua M. Poulton
Malmstrom AFB
819 RED HORSE

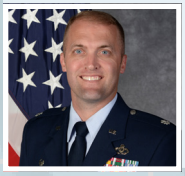
BCE
John Hale
GS-14
Malmstrom AFB
341 CES

BCE
Lt. Col.
Alex Dale Mignery
Malmstrom AFB
341 CES

BCE
Gregory Eric Rollins
GS-14
Maxwell AFB
42 CES

BCE
Lt. Col.
Daniel A. Craig
McConnell AFB
22 CES

DBCE
Stephen C. Matthews
GS-13
McConnell AFB 22 CES

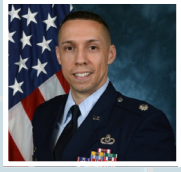


BCE
Lt. Col.
Matthew R. Altman
Minot AFB
5 CES

DBCE
Renetta J. Pearson
GS-14
Minot AFB
5 CES

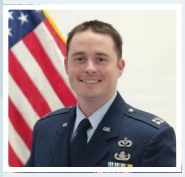
BCE
Lt. Col.
David C. Dammeier
Misawa AB
35 CES

DBCE
AJ Muhs (IO)
GS-14 (Misawa) / GS-13 (JBSA)
Misawa AB / JBSA
35 CES / AFCEC

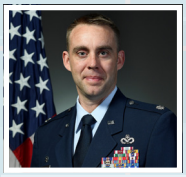


BCE
Lt. Col.
Michael U. Francis
Moody AFB
23 CES

DBCE
John L. Eunice, III
GS-14
Moody AFB
23 CES

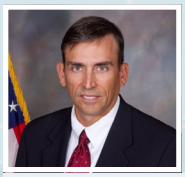


BCE
Captain
Alan N. Vaughn
Morón AFB
496 ABS



BCE
Lt. Col.
Charles G. Hansen
Mountain Home AFB
366 CES

DBCE
Nathan E. Rowland
GS-14
Mountain Home AFB
366 CES



DBCE
Brett T. Williams
GS-13
NAS Fort Worth JRB
301 BCE

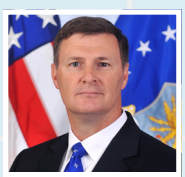
BCE
Col.
Peter P. Feng
Nellis AFB
820 RED HORSE

DBCE
Lt. Col.
Javier Velazquez
Nellis AFB
820 RED HORSE

DBCE
Douglas Fitzpatrick
GS-14
Nellis AFB
99 CES

BCE
Mark S. Bellis
GS-13
Niagara Falls ARS
914 MSG/CE

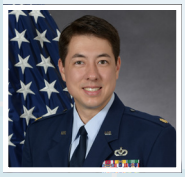
DBCE
Gerald Lee Hromowyk
GS-12
Niagara Falls ARS
914 MSG/CE



DBCE
Gary D. Chesley
GS-15
Offutt AFB

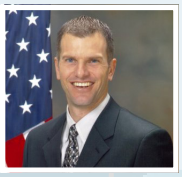
DBCE
Bruce A. McCauley
GS-14
Offutt AFB

BCE
Lt. Col.
Timothy J. Fryar
Osan AB
51 CES



DBCE
Major
Nick Saccone
Osan AB
51 CES

BCE
Lt. Col.
David D. Vanderburg
Patrick AFB/Cape Canaveral AFS
45 CES



DBCE
John F. Faulkner
GS-14
Patrick AFB/Cape Canaveral AFS
45 CES

BCE
Lt. Col.
Dennis L. Phillips
Peterson AFB
21 CES

DBCE
Daniel M. Rodriguez
GS-14
Peterson AFB
21 CES

BCE
Robert F. Moeslein
GS-13
Pittsburgh IAP ARS
911 AW

BCE
Major
Chin T. Hsu
RAF Alconbury
423 CES

DBCE
Timothy D. Brecheen
GS-13
RAF Alconbury
423 CES

BCE
Lt. Col.
Raymond J. Elmore
RAF Croughton
422 CES

DBCE
Chad C. Warren
GS-12
RAF Croughton
422 CES

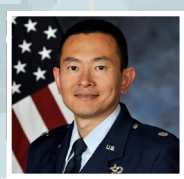
BCE
Andrew D. Davies
C1, MoD
RAF Fairfordb
420ABS/CE

DBCE
Martin R. Thompson
C2, MoD
RAF Fairford
420ABS/CEO

BCE
Lt. Col.
Brandon H. Sokora
RAF Lakenheath
48 CES

BCE
Tara M. Richards, P.E.
GS-13
RAF Menwith Hill
421 ABS

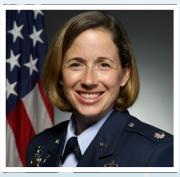
BCE
Tara M. Richards, P.E.
GS-13
RAF Menwith Hill
421 ABS



BCE
Lt. Col.
Robert Liu
RAF Mildenhall
100 CES

DBCE
Mark A. Zimmerhanzel
GS-13
RAF Mildenhall
100 CiES

BCE
Lt. Col.
Ryan G. Walinski
Ramstein AB
786 CES



BCE
Lt. Col.
Kathryn M. Kilker
Ramstein AB
86 CES

DBCE
Don A. Sharrah
GS-14
Ramstein AB
86 CEG

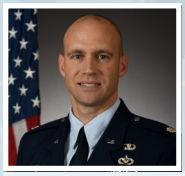
DBCE
Patrick M. Atkinson
GS-13
Ramstein AB
86 CES/CD

DBCE
Scott Hastings, P.E.
NH-IV
Robins AFB
78 CEG/DD

BCE
Lt. Col.
Christopher L Teke
Schriever AFB
50 CES

DBCE
Ed O'Gallagher
Civilian
Schriever AFB
50 CES

BCE
Dennis G. Goodson
GS-14
Seymour Johnson AFB
4 CES



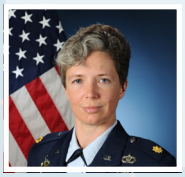
BCE
Lt. Col.
Ross E. Dotzlaf
Seymour-Johnson AFB
4 CES

BCE
Lt. Col.
Brian K. Strickland
Shaw AFB
20 CES

DBCE
Christopher B. Aamold
GS-14
Shaw AFB
20 CES

BCE
Major
John Crocker Fuson
Soto Cano AB
612 ABS

BCE
Lt. Col.
Gregory Carl Mayer
Spangdahlem AB
52 CES

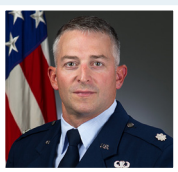


BCE
Major
Rachael L Nussbaum
Thule AB
821 SS

DBCE
Jan Plesner
Contractor
Thule AB
Vectrus

BCE
Cathy R Scheirman
NH-04
Tinker AFB
72 ABW

DBCE
Brad C Beam
NH-04
Tinker AFB
72 ABW



BCE
Lt. Col.
Casey J. Bartholomew
Travis AFB
60 CES

DBCE
Merlin J. Miller
GS-14
Travis AFB
60 CES

BCE
Lt. Col.
Michael D. Askegren
Tyndall AFB
325 CES

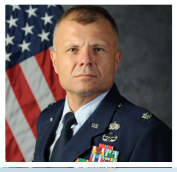
DBCE
Brian P. Stahl
GS-14
Tyndall AFB
325 CES

BCE
Lt. Col.
Jimmy J. Jeoun
USAFA
10 CES

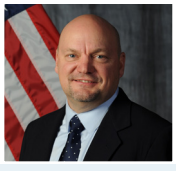
DBCE
Keith L. Butala
GS-14
USAFA
10 CES/CD

BCE
Lt. Col.
Jason Michael Aftanas
Vandenberg AFB
30 CES

DBCE
Richard N. Cote
GS-14
Vandenberg AFB
30 CES

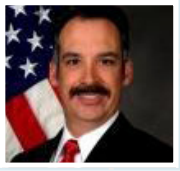


BCE
Lt. Col.
Miroslav P. Karamarinov
Whiteman AFB
509 CES



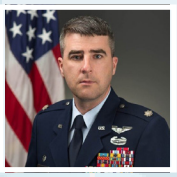
DBCE
Mark H. Wheeler
GS-14
Whiteman AFB
509 CES

BCE
David A. Perkins
NH-04
Wright-Patterson AFB
88 CEG

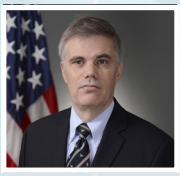


DBCE
Michael L. Howe
NH-04
Wright-Patterson AFB
88 CEG

CES/CC
Major
Tyler Johnson
Wright-Patterson AFB
788 CES



BCE
Lt. Col.
Richard D. Engelman
Yokota AB
374 CES



DBCE
Andrew G. Cross
GS-14
Yokota AB
374 CES

A4C
The Policy Arm

usaf.pentagon.af-a4.mbx.
a4c-workflow@mail.mil
Commercial: 706-693-2644

A4C sets policy to organize, train and equip 51,000+ engineers and oversees the CE enterprise. Civil engineers ... lead the way!

AFIMSC

AFIMSC is the single intermediate-level headquarters staff supporting Air Force-wide installation and expeditionary support activities, including civil engineering support.

ASK.AFIMSC@US.AF.MIL
Commercial: 210-395-1900
DSN: 969-1900

AFCEC
The Execution Arm

AFCEC, an AFIMSC primary subordinate unit, is responsible for providing responsive, flexible full-spectrum installation engineering services and stands as the focal point for military construction and the sustainment, restoration and modernization of Air Force installations worldwide.

AFCEC.WORKFLOW@US.AF.MIL
Commercial: 210-395-8000
DSN: 969-8000

Air Force Civil Engineer

Almanac 2018

www.afcec.af.mil/About-Us/Fact-Sheets/Display/Article/466145/air-force-civil-engineer-magazine/

Printed on recycled paper
(30% post-consumer waste)