UNITED STATES AIR FORCE

2011 DESIGN AWARDS PROGRAM

Architecture

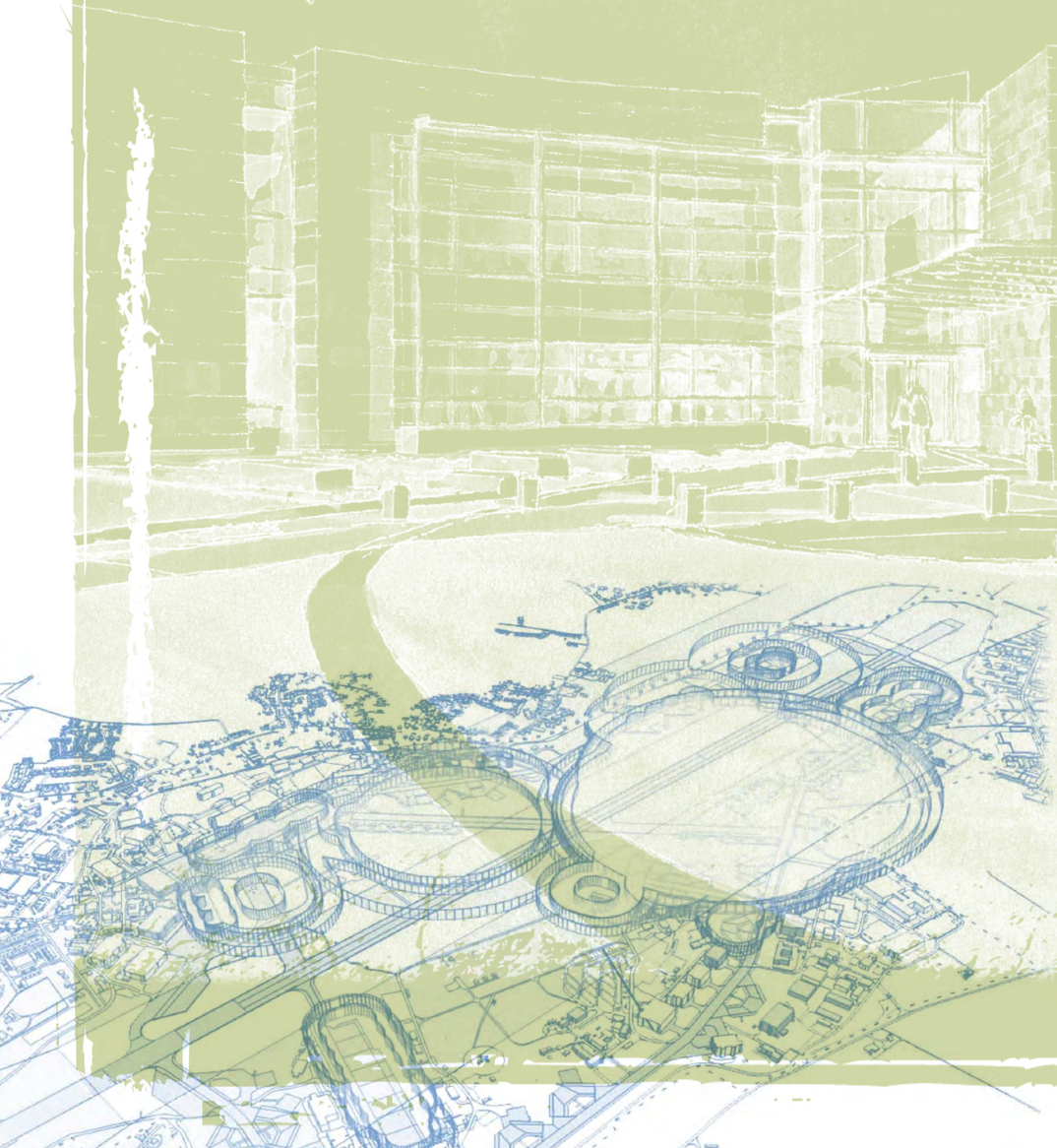
Sustainable Design

Interior Design

Landscape Architecture

Planning

UNITED STATES AIR FORCE
2011 DESIGN AWARDS PROGRAM



For thirty-six years, the USAF Design Awards Program has been our way of recognizing outstanding contributions to the Air Force mission by design professionals around the world. This brochure featuring the 2011 award winners focuses on the teamwork of many professionals who enable the Air Force to maintain its reputation for design and facility excellence. Throughout this brochure you will find multiple design principles that allow the Air Force to provide its Airmen with quality facilities and installations, while responding to ever tighter budgets and increased energy conservation goals.

As the Air Force takes on new challenges in using our resources efficiently while reducing our impact on the environment, the USAF Design Awards Program stands as an effective means of measuring our successes. The program recognizes those who stand out among our many contributing design and construction professionals. This year's winners epitomize the innovative practices we will rely on in the future to streamline our design and construction process, while reducing energy demand and increasing sustainable practices to ensure the Air Force and the Department of Defense builds responsibly.

The USAF Design Awards Program is much more than just an opportunity to congratulate the winners for a job well done. It's a measuring stick we use to determine success and a tool we use to communicate our standards to the design and construction community. As we continually strive for superior and innovative facility designs, I congratulate the winners of the 2011 USAF Design Awards Program.

Timothy Byers, Maj Gen, USAF
The Civil Engineer
DCS/Installations & Logistics

This Annual Report marks the 36th anniversary of the United States Air Force Design Awards Program that was established in 1976 to recognize and promote design excellence. The Air Force sets no limits on the number or type of projects that can compete each year. There are seven project award categories. These include Planning Studies and Design Guides, Sustainable Design, Concept Design, Interior Design, Landscape Architecture, Facility Design, and Military Family Housing.

For each year's competition, an effort is made to secure jurors of the highest professional standards, blending progressive professionals who are knowledgeable of design trends in the private sector with exceptional design professionals currently in government service who understand military terminology and design standards.

The United States Air Force Design Awards Program is a viable and important program that has become institutionalized within the Air Force. It is widely recognized throughout the federal government and is supported by the enthusiastic participation of notable professionals in the private sector. The program is a proud recipient of the 2000 Federal Design Achievement Award, which recognizes exceptional design achievement from all sectors of the federal government.

HONOR AWARD

Planning Studies and Design Guides

352nd Special Operations Group Area Development Plan
RAF Mildenhall, United Kingdom

Concept Design

Mackown Dental Clinic
Lackland Air Force Base, Texas

Ambulatory Care Center
Lackland Air Force Base, Texas

Integrated Network Space Operations Center
Schriever Air Force Base, Colorado

Facility Design

Consolidated Deployment Processing Center and Terminal Facility
Osan Air Base, Republic of Korea

MERIT AWARD

Planning Studies and Design Guides

Airmen's Campus Area Development Plan
Pope Field, Fort Bragg, North Carolina

Triangle District Facilities Excellence Plan – Sustainability Guidelines
Peterson Air Force Base, Colorado

Sustainable Design

Dormitory
Moody AFB, GA

97th Intelligence Squadron Facility
Offutt Air Force Base, Nebraska

Concept Design

Dining Hall/Community Activity Center
Homestead Air Reserve Base, Florida

Landscape Concept Design
Buckley Air Force Base, Colorado

F-22 Hangar, Squadron Operations & Aircraft Maintenance Unit
Hawaii Air National Guard, Hickam Air Force Base

Interior Design

Aragon Dining Hall
Peterson Air Force Base, Colorado

Landscape Architecture

Base Chapel Landscaping
Buckley Air Force Base, Colorado

Facility Design

Maintenance Hangar Renovation
Nevada Air National Guard, Reno

CITATION AWARD

Planning Studies and Design Guides

Installation Development Plan
North Dakota Air National Guard, Fargo

Sustainable Design

A-10 Composite Maintenance Hangar
Arkansas Air National Guard, Fort Smith

C-17 Two-Bay Maintenance Hangar
Travis Air Force Base, California

Concept Design

Mission Support Group Complex
Barksdale Air Force Base, Louisiana

Facility Design

Mission Support Complex
Columbus Air Force Base, Mississippi

Acquisition Management Facility Renovation
Wright-Patterson Air Force Base, Ohio

HONOR AWARD

Planning Studies and Design Guides

352nd Special Operations Group Area Development Plan

RAF Mildenhall, UK

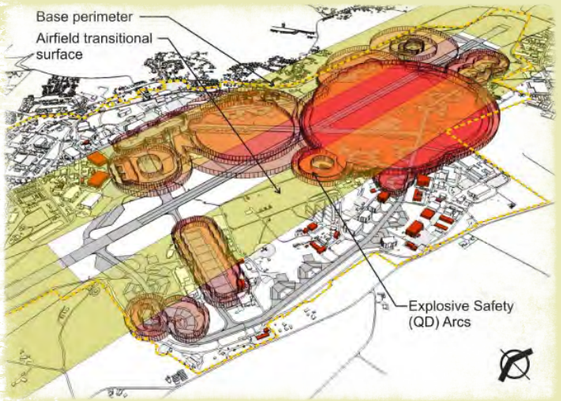
Design Organization: Merrick & Company with HBA L.L.C.

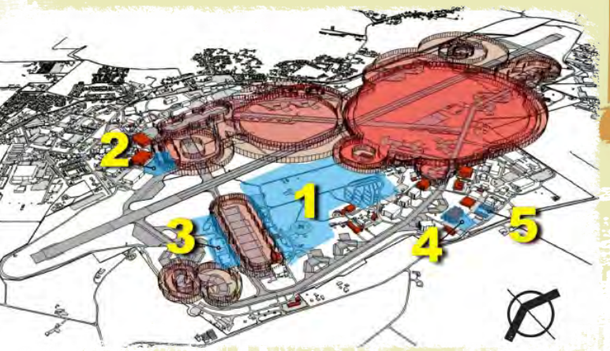
Using Command: Air Force Special Operations Command

Host Command: United States Air Forces in Europe

Design Agent: Air Force Center for Engineering and the Environment

Base Engineering Organization: 100th Civil Engineer Squadron





This plan establishes a strategic vision for the Special Operations Group facilities at RAF Mildenhall. Its goals are to improve mission operations, enhance the environment, and provide facility design and construction standards, while improving quality-of-life, transportation, security, and safety. The primary objective of the Area Development Plan is to enhance the Group's viability as a counter-terrorism, direct action, special reconnaissance, counter-proliferation, unconventional warfare, and personnel recovery operation. This objective is met by providing flexible, state-of-the-art facilities that can adapt and take on new missions, consolidate functions, and accommodate a potential new aircraft beddown.

The Area Development Plan's solution is to condense 50 scattered facilities into 27 new facilities located in a consolidated campus. This campus will house existing operations and future mission expansion. The new campus replaces facilities that have exceeded their usable lifespan and provides adequately sized facilities to address building space and vehicle parking shortfalls. Relocation of critical facilities off of the fence line and proper building setback from vehicular circulation improves overall antiterrorism/force protection compliance. The plan's solution embraces the existing RAF Mildenhall 2020 plan direction and suggested facility demolition to achieve an overall reduction in square footage.

The plan made significant use of computer modeling software to clearly convey existing constraints and conditions, and to animate the complex sequencing of projects. Oblique aerial illustrations were used in concert with traditional map figures to convey all relevant information in book and video format.

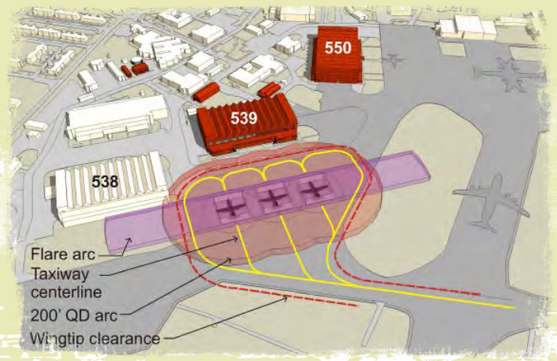
The Special Operations Group campus was designed to emphasize conservation, efficiency, and sustainability in energy expenditure by significantly reducing the overall facility footprint, capitalize on solar gain, replace extremely energy inefficient structures with high efficiency designs, and reduce or eliminate the need for vehicular travel between facilities by developing a pedestrian campus.

JUROR COMMENTS:

- *Plan option evaluations were clearly presented and defended*
- *Strategic visioning at its best*
- *Great articulation of detail*

5.3 ADP Final Rendering

352nd SOG Consolidated Campus

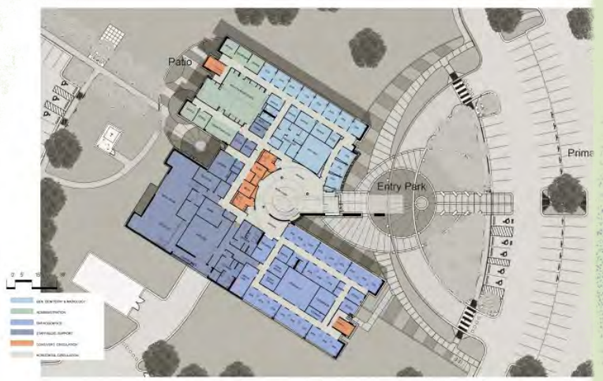


HONOR AWARD

Concept Design

Mackown Dental Clinic
Lackland AFB, TX

Design Organization: Hoefer Wysocki Architects
Requiring Command: Air Force Surgeon General Health Facilities Division
Host Command: Air Education and Training Command
Design Agent: Fort Worth District US Army Corps of Engineers
Base Engineering Organization: 37th Civil Engineer Squadron



As a complete replacement of the existing dental clinic at Lackland Air Force Base, this facility will provide for dental care, dental laboratory capabilities, support spaces and graduate education residency programs. The design concept locates all Dental Treatment Rooms on the perimeter for daylight, forming two engaging C-shaped pavilion wings. This efficient geometry creates two pavilions joined by public spaces, support functions and vertical circulation. The shifted wings allow the public areas to line up, minimizing patient travel and maximizing staff efficiency. The massing is distinctive and the building shape is being used as a graphic basis for branding the facility.

To create a campus feel, the wings of the building are set on the same axis as the nearby Ambulatory Care Center, acting as a gateway or sentinel. The facility's configuration and geometry are designed to maximize operational, circulation, functional and day-lighting efficiencies. The four pods of Dental Treatment Rooms at each quadrant share a support corridor to the core of the facility. This compact floor plan minimizes all travel distances for staff and patients. Public corridors are separated from staff circulation maximizing operational efficiency.

The design notion is to create the next-generation dental clinic where the staff and patients are the center of attention. The facility will create a truly unique, efficient and welcoming facility. The entire building is configured to maximize natural lighting, minimize travel distances and envelop the users in a comfortable, non-institutional environment while providing the infrastructure needed for modern medical equipment.

The major building departments are planned in a linear concept with a continuous corridor and organized around central core. This approach will allow for each department to grow and expand independently as needed in the future, without disturbing the operation of the entire facility. The facility is on track to exceed LEED® Gold certification.

JUROR COMMENTS:
- *Well-integrated with its surroundings*
- *Elaborate, open concept with carefully thought-out patient comfort*
- *Good use of outdoor spaces and landscaping to create a more relaxed patient experience*
- *Modern exterior stylings fit nicely with technology-centered dental facility*

HONOR AWARD

Concept Design

Ambulatory Care Center

Lackland AFB, TX

Design Organization: HDR
Using Command: Office of the Air Force Surgeon General
Host Command: Air Education and Training Command
Design Agent: Fort Worth District US Army Corps of Engineers
Base Engineering Organization: 37th Civil Engineer Squadron

Planned to serve over 55,000 beneficiaries with more than 2,500 patient visits daily, this 680,000-square-foot "Super Clinic" is the largest of its kind in the Department of Defense. The new state-of-the-art ambulatory surgical facility required a phased design solution as funding is authorized over multi-year MILCON appropriations bills. Its patient-centered design promotes intuitive navigation by utilizing a concourse as a collecting spine, modular building wings, and contextually appropriate massing and facade composition. The orientation of the building for passive solar control and the development of landscaped areas within and around the building footprint enhance the building's sustainability.

The project's challenging construction phasing requires full access and functionality for the neighboring Wilford Hall Medical Center until its demolition in Phase 4. The concept of "plug-&-play" modules, each one wholly independent and useable as it is completed, satisfies this requirement. The "Formation" scheme provides ready implementation of each phase while projecting a strong image. The relationship and approach to the clinic from the parking structure are thoughtfully defined by the arcade along The Concourse, next to the Legacy Plaza.

This design utilizes the existing conditions of the site while enhancing its legacy. The new facility complies with the Lackland Air Force Base master plan and strict architectural guidelines, blending the regional character of central Texas with the high-tech expression of the Armed Forces. The articulation of the program into four slender bars achieves a number of project goals simultaneously, resolving the pragmatic requirement for phasing, and the aesthetic goal of reducing the apparent overall mass of the building. The building's fingerlike form aids in way-finding and addresses sustainability by providing access to natural light and views of the landscaped garden spaces between the building wings.

With the goal of attaining a LEED® Gold rating, the facility has proper solar orientation, maximizes green space and the retention of existing trees, and maximizes daylight into the building. Each of the four courtyard spaces are landscaped, with a roof terrace, garden-level plaza, and a Therapeutic Garden.

JUROR COMMENTS:

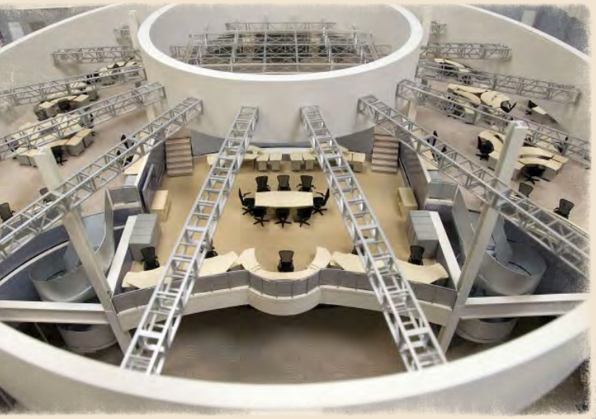
- *Outstanding use of materials to create a holistic healing environment*
- *Well ordered for visitor and patient orientation*
- *Excellent use of "Main Street" mall for orientation and wayfinding for each clinic module*
- *Very prominent appearance for a landmark facility on Lackland*

HONOR AWARD

Concept Design

Integrated Network Space Operations Center
Schriever AFB, CO

Design Organization: Applied Minds, Inc.
Using Command: Air Force Space Command
Base Engineering Organization: 50th Civil Engineer Squadron



Recognizing the necessity of an integrated approach to satellite operations, Air Force Space Command officials decided they needed a single unified operations center on the second and third floor of an existing building. The resulting design features a high-bay space to facilitate collaboration, a large projection screen for shared situational awareness, high-performance computing and audio/visual equipment, sound attenuating geometries and materials, innovative use of time-of-day and energy-efficient lighting, and "snap-glass" in the conference room for data projection and transparency to the operations floor.

Operator alertness is absolutely crucial in the center, so time-of-day lighting that shifts from white-to-blue throughout the daily cycle is employed throughout the facility. Additional attention is given to the illumination levels of computer monitors, video displays and large array projections; all with the goal of enhancing overall mission effectiveness.

A two-story rotunda stands as the physical and symbolic heart of the design. This elliptical "high-bay" space enables an extremely large 60-foot-wide shared projection screen that is viewable by all operators in the facility, thus facilitating a shared situational awareness among leadership, operators and planners. In addition to affording this large canvas, the rotunda houses the crew changeover area and thus will facilitate an increased sense of shared mission among the crew and leadership. A "theatrical" truss system further defines the rotunda and provides mounting locations for local lighting systems, affording a high degree of flexibility in support of the environment's dynamic social architecture.

The existing building has many high-quality characteristics that cannot easily be duplicated today either because the systems and materials are no longer available or because current contract restrictions would preclude their use. The building is virtually dust-free due to the intake air scrubbing systems employed to protect sensitive computer hardware. The net result of this precaution is a building that appears virtually brand new under the surface. To retain the inherent value of the existing building, many components will be carefully disassembled and reused, rather than be subject to wholesale demolition.

JUROR COMMENTS:
- *Great "rotunda" space*
- *Very innovative, state-of-the-art lighting*
- *Dynamic floor plan*
- *Reflects the Air Force's mission*

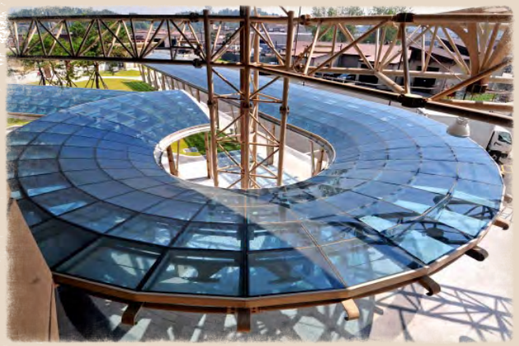
HONOR AWARD

Facility Design

Consolidated Deployment Processing Center and Terminal Facility

Osan AB, Korea

Design Organization: AMKOR AE, Inc. SAC International Ltd.
Using Command: Pacific Air Forces
Design Agent: Far East District US Army Corps of Engineers
Base Engineering Organization: 51st Civil Engineer Squadron



This combined Deployment Processing Center and Air Passenger Terminal Facility is designed to serve most U.S. service members and their families flying to or from Korea. The facility also houses a Republic of Korea Air Force Operations Center. The building is designed to meet antiterrorism/force protection requirements, chemical, biological and radiological collective protection and noise reduction requirements.

Using movement as a theme, the design incorporates patterned, colored concrete or brick pavers to create a distinguished entryway, and ceiling patterns to guide the movements of passengers throughout the facility. This is done with variations in ceiling planes and materials, including warm toned perforated metal, bamboo veneer paneling and translucent acrylic. A contemporary glass elevator in the main lobby provides a visual movement of the users through transparency. Architectural elements are used throughout the design to guide the flow of passengers through the site and facility. A prominent truss structure extends out from the main terminal, orientating the users moving toward and away from the building entrance. A glass roof canopy covering the bus stops curves toward the entrance of the terminal and provides visual movement. The building's facade reflects traditional Korean style architecture using modern materials.

While the building is primarily intended for use as a deployment facility, it can also accommodate large assemblies during exercises or contingency operations. The Deployment Processing Center fully incorporates a collective protection system with two-stage airlocks at the entrances to the secure spaces, with the pressurized sterile area serving as a centralized, protective facility for operations during chemical-biological attack. While not a LEED® certified facility, the contractor diverted more than 50 percent of construction waste materials away from disposal during construction, and the facility has many energy efficient and water conservation design features.

JUROR COMMENTS:

- *Outstanding visual elements for an exceptional design*
- *Great use of glass and metal*
- *Creates very positive first impression of installation*
- *Nicer than many civilian airport terminals*
- *Superb entrance sequence with appealing architecture*

MERIT AWARD

Planning Studies & Design Guides

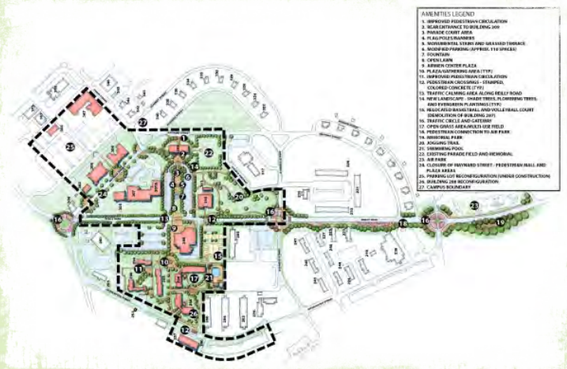
Airmen's Campus Area Development Plan

Pope Field, Ft. Bragg, NC

Design Organization: KZF BWSC, Joint Venture
Using Command: Air Mobility Command
Design Agent: Savannah District US Army Corps of Engineers
Base Engineering Organization: 43rd Civil Engineer Squadron

Pope Air Force Base has been recently renamed Pope Army Air Field as part of a Base Realignment and Closure action. To maintain a definite Air Force identity, an area of the current Air Force base was designated as the Airmen's Campus. With 3,400 airmen remaining at Pope Field, a stamp of Air Force identity is needed to provide future generations of Airmen a sense of unique service pride. The vision and mission for the Airmen's Campus focuses on providing a unique, aesthetic, and functional environment in which to live, work, and socialize, and a place that exudes the pride, distinction, and heritage of the Air Force. The plan calls for a "people oriented" campus, a clearly establish Airmen's Center hub that encourages social interaction with connections to satellite social areas, infrastructure conducive to public movement, comfortable amenities and services for pedestrians, and improved personnel security and usability at night.

The plan accommodates existing and future Pope Field heritage artifacts and history, incorporates historical Air Force concepts and memorials, and develops unique outdoor social areas representing the five Major Commands represented on Pope Field. To maintain a distinct Air Force identity for the Airmen's Campus, the plan includes heritage displays, memorials, and Air Force logos and icons. Multiple elements were used throughout the design to integrate a distinct Air Force character including relocation of the Air Park to a central location within the campus boundary. A heritage display area abutting, the Harley Pope Memorial, and the overall connection of the three Heritage Halls provides recognition of the history of Pope Air Force Base and the people who have served there.



JUROR COMMENTS:

- *Plan supported the stated goals of making the campus a better place in which to work*
- *Freehand sketches give a human quality to the thought process*
- *Design oriented for people not vehicles*

MERIT AWARD

Planning Studies & Design Guides

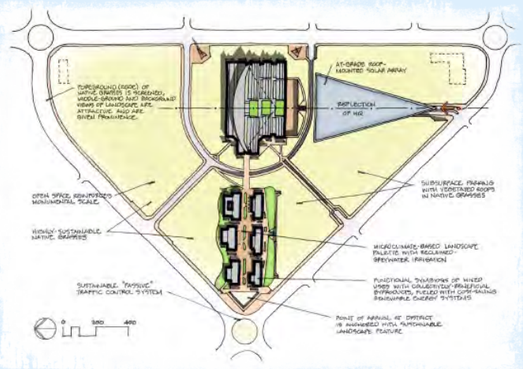
Triangle District Facilities Excellence Plan – Sustainability Guidelines

Peterson AFB, CO

Design Organization: Tetra Tech with James R. Fennell
Using Command: Air Force Space Command
Base Engineering Organization: 21st Civil Engineer Squadron

Transforming the central core of Peterson Air Force Base into a higher-density district with energy efficient, sustainable buildings will generate an exceptionally sustainable, vibrant mixed-use development. Founded on the proven strengths of the early American small town model, combined with proven contemporary practices in planning, design, and engineering, the Peterson Triangle is an example of a self-reliant and self-sustaining district. It demonstrates the Air Force's commitment to both environmental and fiscal responsibility. Simultaneously, it sets standards for bringing optimized functionality, energy efficiency, and cost-saving renewable-energy systems to land development, site design, and architecture throughout the Air Force.

This model for mixed-use development uses heat recovery, passive shading, and grey-water reclamation in a highly integrated fashion to benefit users, both collectively and individually. By achieving all available points under the LEED® Energy and Atmosphere category, the facilities will maximize energy savings and energy efficiency. Facades feature passive shading, so that no sunlight enters a building during the mechanical cooling cycle. Conversely, buildings achieve maximum solar gain when in heating mode. The building mechanical systems primarily utilize ground-source heat pump systems supplemented with solar thermal and solar photo-voltaic arrays. These renewable-energy combinations use approximately 50 percent less energy than what is consumed by typical commercial and housing facilities. Passive heating and thermal mass features are projected to save an additional 10-15 percent of energy costs.



JUROR COMMENTS:

- *Unique and sustainable design for the area*
- *Great example of mixed use development*
- *Clear graphics demonstrate how the sustainability features of site and architecture work*
- *The plan is logical, simple, and understandable*

MERIT AWARD

Sustainable Design

Dormitory

Moody AFB, GA

Design Organization: TranSystems Corporation
Using Command: Air Combat Command
Design Agent: Savannah District US Army Corps of Engineers
Base Engineering Organization: 23rd Civil Engineer Squadron

This dormitory recently achieved LEED® Gold certification from the U.S. Green Building Council while being constructed well below the programmed amount. To achieve this certification, the design team employed many innovative strategies. The building uses a special type of low density precast concrete known as Autoclaved Aerated Concrete for floor decks and bearing wall panels. It also uses a geothermal heat exchange system consisting of geothermal wells with a trench system that doubles as a storm water collection component. Whenever possible, construction waste materials were stored, recycled and reused on site to save transportation, storage, and waste processing costs. Subcontractors participated in the on-site separation of construction materials for possible reuse to help reduce landfill tipping fees. Areas of separation were developed for each type of material to allow for the items to be stored, pulled, and used again as necessary or to be removed and salvaged. Time-based removal of construction materials was used as an effective method of segregating materials. Leftover materials were removed before becoming mixed or contaminated with materials from another construction phase. Credit goes to the project's quality control manager for being willing to carry out this plan, and a desire to keep a clean and organized site. Recycling bins were designated for cardboard, metal, brick, concrete, clean wood, plastic and other building materials.

JUROR COMMENTS:

- *Regional design attaining LEED® Gold certification*
- *Interesting use of materials to achieve sustainability*
- *Impressive to achieve Gold rating on this facility type*

MERIT AWARD

Sustainable Design

97th Intelligence Squadron Facility

Offutt AFB, NE

Design Organization: Kenneth Hahn Architects
Using Command: Air Combat Command
Design Agent: Omaha District US Army Corps of Engineers
Base Engineering Organization: 55th Civil Engineer Squadron

This addition to the existing intelligence squadron facility is connected by an 82-foot long link. Nearly all of the facility is designed as a Sensitive Compartmented Information Facility to house approximately 400 Air Force and contractor personnel.

The project's goals were to provide a clean and professional-looking facility for the men and women charged with our nation's security; to relieve overcrowding within their existing facility; and to incorporate sustainable design features. The project has succeeded on all counts, creating a facility that enhances the productivity of the squadron and instills pride of ownership.

Many of the materials used in the project contain pre- and/or post-consumer recycled content. Waste was minimized by separating it into containers, allowing it to be diverted to recycling centers for reuse. The project recycled 34 tons of metal, over 12 tons of cardboard, 1,000 pounds of wood doors, 44 tons of wood scrap, 429 tons of concrete; over 600 pounds of drywall; and nine tons of mixed recyclables. Indoor environmental quality was a very important aspect of the design, in response to the poor interior environment of the existing facility. Nearly a third of the LEED® points awarded for this design were in this category, and include increased ventilation, Indoor Air Quality management plans both during construction and before occupancy, the use of low-emitting materials, individual controllability of the lighting and mechanical systems; and designing to enhance thermal comfort.

JUROR COMMENTS:

- *Achieved high LEED® Silver certification*
- *Pleasant design solution*
- *Overall attractive design*

MERIT AWARD

Concept Design

Dining Hall/Community Activity Center

Homestead AFB, FL

Design Organization: Pond and Company
Using Command: Air Force Reserve Command
Design Agent: Louisville District US Army Corps of Engineers
Base Engineering Organization: 482nd Mission Support Group/CE

This new dining facility and community activity center will replace the adjacent Falcon's Nest Club. The site design maximizes the use of the existing patio to create flexible outdoor space. This enables large group receptions and allows expansion of the outdoor space to the lawn area for large weddings and ceremonies. It also provides a walk-up exterior bar. To allow the Falcon's Nest Club to remain operational during construction, the new building was positioned in front of the existing facility and aligned so that the main entrance tower and clerestory are on axis with Coral Seas Boulevard. This entry axis is reinforced via a palm tree lined pedestrian entrance plaza.

The facility will feed up to approximately 450 people daily, with a seating area able to serve approximately 300 diners at one time. Separate bar and lounge areas and a community activity center are situated so that dining functions can be expanded into these areas as necessary. The large dining area was zoned into three smaller areas primarily by the use of ceiling treatments, different seating arrangements, and by an operable partition that allows a portion of the area to be closed off from the main dining area as needed. The entire south wall of the dining area has floor to ceiling glazing to afford significant day-lighting into the dining area while providing views to the covered patio and beyond.

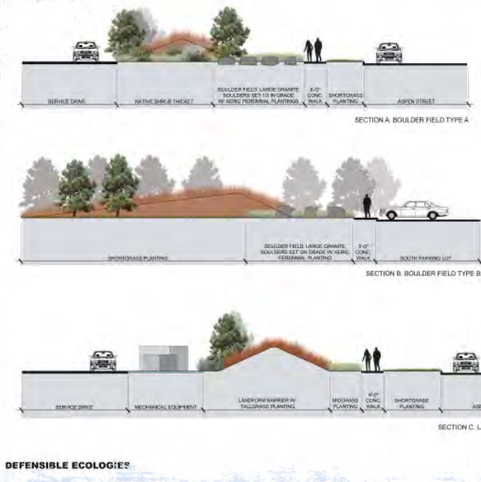
The exterior architecture of the facility will compliment and blend with the adjacent structures which reflect the typical South Florida "Key West" architectural style. This style includes an expressed entrance, deep overhangs, warm colors, and accent elements. Like the adjacent structure, the new facility will feature metal-clad hip roofs, stucco walls with a lower wainscot of split-faced concrete masonry accents, and cast stone trim. The raised clerestory circulation spine and the main entrance tower are the building's most prominent features. The clerestory has a series of punched openings which admit natural light during the day. At night, uplighting along the spine and within the entrance tower will provide a recognizable ribbon of light. Maximum use of natural day-lighting was coupled with light level sensing switches to minimize the need for artificial lighting.

JUROR COMMENTS:

- *Site plan works very well*
- *Nice transition from interior to exterior spaces*
- *Well-grounded to the site*
- *Excellent flow and functionality of servery to dining area*
- *Architecture well suited for South Florida*
- *Open and inviting interior spaces*

This landscape concept design balances the pragmatic requirements of site security with an attractive and functional landscape composition. As an alternative to traditional approach of site security, the concept integrates and embraces security requirements rather than concealing them. Site security is defined in terms of earth and geology instead of concrete and bollards. Security barriers and landscapes are integrated throughout the site, turning vehicle barriers into functional landscape features that are attractive and sustainable while not compromising the defensible perimeter.

This light-handed approach to site design and security integration incorporates landscape features that are low in water consumption, maintenance and lifecycle costs. Indigenous plants from the local prairie are combined with a flexible irrigation system, allowing watering only when needed. Periodic maintenance is only necessary to maintain appropriate plant heights for security purposes and prairie health.



MERIT AWARD

Concept Design

Landscape Concept Design

Buckley AFB, CO

Design Organization: RNL Design
Using Command: Air Force Space Command
Base Engineering Organization: 460th Civil Engineer Squadron

JUROR COMMENTS:

- *The antiterrorism/force protection concepts demonstrated in this plan should be adopted by all installations where possible*
- *Use of age-old landscape concepts to provide force protection without placing "jersey barriers" everywhere*
- *Ecology and water management were included in the concept*

MERIT AWARD

Concept Design

F-22 Hangar, Squadron Operations & Aircraft Maintenance Unit

Hawaii Air National Guard, Hickam AFB, HI

Design Organization: Burns & McDonnell Engineering Company, Inc
Using Command: Air National Guard
Host Command: Pacific Air Forces
Design Agent: U.S. Property and Fiscal Office for Hawaii
Base Engineering Organization: 154th Civil Engineer Squadron

This consolidated squadron operations and maintenance facility supports the Hawaiian Air National Guard F-22 Beddown Program and becomes the cornerstone for the wing's facility transformation. The project tastefully integrates the base's architectural heritage while meeting functional requirements. The best solution among multiple hangar concepts features a pull-through column free configuration with vertical lifting fabric doors. This eliminates the need for door pockets, maximizes useable floor area, and provides a clear span entry to the hangar for larger aircraft with varying wing spans.

The six position hangar bay is the most prominent feature of the facility and will be the first of its kind to house the new generation F-22 aircraft. Another prominent design feature is the two-story aircraft maintenance unit and squadron operations portion of the facility. This section features a covered entrance lanai, and a trellised exterior break area for maintenance personnel. A covered outdoor observation deck overlooks the airfield, and is located adjacent to the squadron operations break room on the second floor.

JUROR COMMENTS:

- *A well designed, one-stop shop*
- *Pleasant work environment for the staff and flight crew*
- *Blends nicely with Hawaiian style*

MERIT AWARD

Interior Design

Aragon Dining Hall

Peterson AFB, CO

Design Organization: Keys Associates
Using Command: Air Force Space Command
Base Engineering Organization: 21st Civil Engineer Squadron

This interior renovation project provides durable, updated, and sustainable finishes and furnishings in compliance with the base's Facilities Excellence Plan. Its professional décor creates a desirable setting for dining and relaxation and unifies the vintage 1959 facility into a cohesive, well-designed space. By using Colorado landscape art and Colorado sport team logos etched in glass, the interior spaces now flow together. One dining room was a sports bar atmosphere, while the other has a contemporary Colorado feel with local "Garden of the Gods" landscape art. The lobby and dining rooms both have stone accents to carry the Colorado theme throughout.

The renovation has many sustainable features. The stone veneer was quarried less than 500 miles from the job site, the glass booth dividers were manufactured less than 50 miles away, and existing booths were reused after refurbishing the wood and upholstery. Existing carpet material was recycled. Plumbing and lighting fixtures have been updated and accessibility for the disabled was addressed. Circulation through the food line has been reconfigured to eliminate cross traffic and to allow access to both food and beverages.

The dining hall's open floor plan with two large dining rooms remained unchanged, but a demountable glass wall allows one section of a dining room to be closed off for special functions while allowing natural light to flow to the adjacent spaces.

JUROR COMMENTS:

- *Furniture is varied – booths and tables/chairs and stools*
- *Use of stone and wood reflects Rocky Mountains*
- *Frosted glass lends light and vistas*

MERIT AWARD

Landscape Architecture

Base Chapel Landscaping

Buckley AFB, CO

Design Organization: HBA L.L.C.
Using Command: Air Force Space Command
Design Agent: Omaha District US Army Corps of Engineers
Base Engineering Organization: 460th Civil Engineer Squadron

The landscape design for the new chapel at Buckley Air Force Base is very natural in its appearance, fitting into the local environment very well. Embracing its "prairie" setting, the landscape design is beautiful without being overbearing and contrived. By creatively using indigenous plant materials, landscape maintenance and water requirements are substantially reduced compared to that of a comparable manicured approach with a full irrigation system. The design's light-handed approach incorporates landscape features that are low in water consumption, maintenance and lifecycle costs. Periodic maintenance is only necessary to maintain appropriate plant heights for security purposes and prairie health.

JUROR COMMENTS:

- *The landscape supports sustainability goals of the entire constructed project*
- *Sustainable projects do not have to be rock gardens. This project used permeable organic mulches and plantings to create a very pleasing landscape*
- *Plant material selections look as though they could have been relocated from the nearby Colorado foothills native landscape*

MERIT AWARD

Facility Design

Maintenance Hangar Renovation

Nevada Air National Guard, Reno

Design Organization: HK Architects
Using Command: National Guard Bureau
Design Agent: US Property and Fiscal Office for Nevada
Base Engineering Organization: 152nd Civil Engineer Squadron

Constructed in 1950, this maintenance hangar has undergone numerous modifications, but remained an unattractive, inefficient, and outdated structure unsuited for C-130 aircraft. Renovated to meet operational requirements and improve internal functional relationships, the attractive building now fits into its surroundings. By retaining the original structural frame, the renovation was completed at roughly one half of the anticipated cost of a comparable new facility, greatly reducing the need for new materials. The structural frame required significant modifications to comply with current seismic and force protection requirements. The interior was reconfigured to orient the main entrance toward the base, with a tinted glass curtain wall now facing the base entry road. The hangar's exterior plaza matches the "town square" concept seen elsewhere on base, and a curved metal roof was added to the building to reflect other newer base facilities. Many surfaces in the industrial areas were left in their natural condition and ceiling treatments and other finishes were not added. Where new materials and finishes were required, products with high recycled content were used.

JUROR COMMENTS:

- *Exceptional renovation*
- *Dramatic contrast from old to new*
- *Responds nicely to architectural compatibility*
- *Excellent rehabilitation of dilapidated hangar – amazing improvement!*

CITATION AWARD

Planning Studies and Design Guides

Installation Development Plan

North Dakota Air National Guard, Fargo

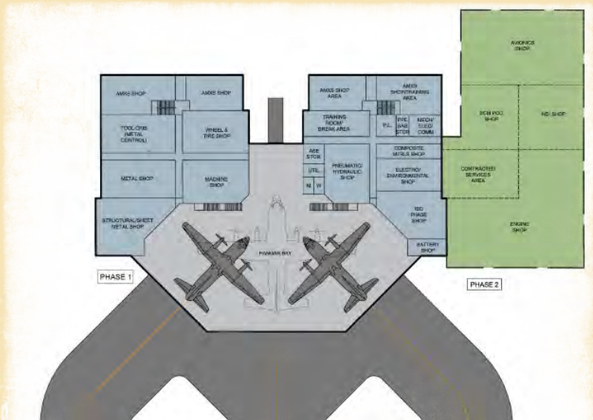
Design Organization: John Gallup Associates
Using Command: National Guard Bureau
Design Agent: US Property and Fiscal Office for North Dakota
Base Engineering Organization: 119th Civil Engineer Squadron

With recent changes to assigned aircraft, this Installation Development Plan outlines a strategy to accommodate the new missions while providing for the evolving needs of ongoing operations and represents the foundation for future installation development. The plan outlines the logic and reasoning for the proposed capital improvements and provides drawings that illustrate the physical layout of proposed improvements. Future development plans consider flexibility, expansion capability, and phasing potential. The plan addresses accommodating future cargo aircraft, incorporates current antiterrorism/force protection guidance, promotes a campus atmosphere that encourages walking, and co-locates compatible functions to improve efficiency and minimize land requirements. It provides future mission flexibility and growth potential, relocates functions as needed, optimizes the use of existing facilities where appropriate, and replaces substandard, inefficient buildings.

Designers completed a very thorough analysis of both existing space and site conditions to help guide the planning process. The resulting facilities program was designed to balance current facility space with projected future requirements. Not only does the plan seek maximum efficiency in all installation operations, it provides an implementation strategy that ensures timely funding and execution. Additionally, site analyses clearly include elements that influence future design decisions. Access control points, vehicular circulation corridors, prevailing winds and seasonal sun patterns were all considered and graphically presented.

JUROR COMMENTS:

- *Great to see such thorough planning at a small installation*
- *Clear objectives were stated*
- *Graphics supported and clarified the plan*
- *The plan appears to have been logically and pragmatically developed*



CITATION AWARD

Sustainable Design

A-10 Composite Maintenance Hangar

Arkansas Air National Guard, Fort Smith

Design Organization: SSi - Pond Design-Build Team
Using Command: National Guard Bureau
Design Agent: US Property and Fiscal Office for Arkansas
Base Engineering Organization: 188th Civil Engineer Squadron

This 30,000-square-foot, three-bay hangar supports corrosion control, fuel cell maintenance, and weapons loading training for the A-10 aircraft. The facility also provides maintenance spaces, paint areas, administrative areas, training rooms, storage, and locker rooms.

Ventilating large open hangar bays is inherently very energy-inefficient, so energy recovery units were used to make the ventilation of the hangar bays a more energy efficient process. Outdoor air delivery monitoring ensures that the ventilation systems maintain the design minimum ventilation requirements. Also, an indoor air quality management plan was implemented during construction and after occupancy. The plan requires low-emitting adhesives, sealants, paints, coatings, carpet systems, composite wood and agrifiber products. This reduced the indoor air contaminants that would be harmful or uncomfortable to installers and building inhabitants. Through the implementation of a waste management plan, the contractor was able to divert 96 percent of all construction waste from a landfill.

JUROR COMMENTS:

- *Commendable for achieving LEED® Silver on a very energy-inefficient building type*
- *Nice use of differing materials*
- *Good functional admin and hangar areas*
- *Challenging to achieve LEED® Silver on a hangar facility*

CITATION AWARD

Sustainable Design

C-17 Two-Bay Maintenance Hangar

Travis AFB, CA

Design Organization: TranSystems Corporation
Using Command: Air Mobility Command
Design Agent: Naval Facilities Engineering Command Southwest
Base Engineering Organization: 60th Civil Engineer Squadron

As the centerpiece of the C-17 program at Travis Air Force Base, this 101,700-square-foot, two-bay maintenance hangar greatly improves the ability to maintain critical elements of the C-17 and KC-10 fleet and to support Air Mobility Command's mission in the Pacific region. The hangar is designed to accommodate virtually all types of general maintenance functions for two aircraft simultaneously.

Sustainability innovations in the hangar design significantly improved the facility's energy and water efficiency. The maximized use of recycled structural steel contributed to nearly 35 percent of the project total material costs attributable to post-consumer recycled materials. Other recycled content material included metal stud framing, acoustical ceiling tiles and insulated metal walls and roof panels. Nearly 100 percent of construction waste was diverted from landfills by designating central recycling areas for collecting construction debris and building demolition materials. Demolished concrete was ground on site and reused as engineered fill.

The hangar design includes many other sustainable features, such as translucent wall panels in the hangar bays. Although unable to meet some LEED® criteria due to the size of the hangar footprint, the natural light contributes substantially to the quality of the working environment and significantly reduces life-cycle lighting costs. The quality of the indoor environment is superior in comparison to traditional designs. This is due to increased ventilation, an indoor air quality management plan, use of low-emitting materials, providing improved control of lighting and thermal comfort systems by building occupants, and providing exterior views for more than 90 percent of the occupied spaces.

JUROR COMMENTS:

- *Achieved LEED® Silver on a very difficult building type for energy efficiency*
- *Utilitarian building with sustainable attributes*
- *Design goes beyond typical utilitarian hangar design*

CITATION AWARD

Concept Design

Mission Support Group Complex

Barksdale AFB, LA

Design Organization: Pond and Company
Using Command: Air Force Global Strike Command
Design Agent: Naval Facilities Engineering Command Southeast
Base Engineering Organization: 2nd Civil Engineer Squadron

This new facility will consolidate and house the various functions and groups of the mission support group, improve efficiency between functional groups, and reduce overall space utilization while improving customer service. The building's narrow site drove the linear three-story design and places the building between two separate parking areas. A tree-lined pedestrian plaza connects the main entrance to the parking areas and provides an opportunity for large outdoor gatherings.

The designers worked closely with the building users to co-locate waiting areas to one central location within the building as opposed to the traditional individual "suite" waiting areas. This consolidation reduces overall space requirements and improves efficiency.

The new facility resides within the community area of the base, which includes such functions as the commissary, Base Exchange, education and recreation facilities, and enlisted personnel dormitories. The design of the new facility will compliment and blend with the existing surrounding buildings by conveying a contemporary architectural aesthetic while suggesting a role of prominence within its immediate surroundings.

JUROR COMMENTS:

- *Thorough, comprehensive site development*
- *Nicely articulated façade and materials*
- *Superb overall exterior concept*

CITATION AWARD

Facility Design

Mission Support Complex

Columbus AFB, MS

Design Organization: Mobile District US Army Corps of Engineers

Using Command: Air Education and Training Command

Base Engineering Organization: 14th Civil Engineer Squadron

Comprised of six interactive and interdependent organizations, some of the offices service a large volume of customers on a daily basis. These six organizations were previously located in separate facilities, but their consolidation now provides one-stop customer support. The new complex significantly improves the command and control of administrative functions while maintaining individual identity of the various organizations.

With its prominent Greek Revival Antebellum architecture and site design, the complex met the goal of becoming a centerpiece destination building for the Columbus Air Force Base town center. The building creates a campus common environment by using architectural elements and site composition. The 270-foot facade is broken into building recesses and projections providing variety in negative spaces for landscaping opportunities and a variety of light and shadows while preserving mature trees. The architecture of this facility features antebellum references by use of textured brick veneer contrasted with cast stone elements. The lantern over the lobby is the most prominent feature borrowed from local historical structures. Colonnades define two sides of the lobby and provide strong vertical elements to identify the main entrance to customers. The lobby features exterior views and natural lighting from windows and the lantern above. The tall octagonal columns are constructed of a steel structure enclosed with glass reinforced concrete fabrications that give the appearance of cast stone.

JUROR COMMENTS:

- *Beautiful interiors*
- *Great shade and shadows created by natural light in the lantern*
- *Reflects local Southern architecture in a modern context*
- *Antebellum architecture works very well for Mississippi*

CITATION AWARD

Facility Design

Acquisition Management Facility Renovation

Wright-Patterson AFB, OH

Design Organization: Edge & Tinney Architects, Inc.

Using Command: Air Force Materiel Command

Design Agent: Louisville District US Army Corps of Engineers

Base Engineering Organization: 88th Civil Engineer Directorate

This project transformed a 1930's brick masonry building into a new modern office facility while retaining the building's original character as the first Air Force Museum. The user's needs were met through a variety of flexible open office spaces equipped with conference rooms and other traditional office amenities. Restoring the building to its original appearance required major exterior restoration and repairs to the original interior finishes. Located only 40 feet from a public street, the facility had to meet strict antiterrorism/force protection requirements. This involved significant reinforcement for windows, doors, skylights, roof, walls, and the overall structure. These challenges were even greater when combined with restoring the facility's original historical features. The State Historic Preservation Office required many alterations to be historically accurate and appropriate as the facades were restored to their 1930's appearance. This involved removing a two-story mechanical addition and installing new historically suitable windows. The buildings original ornamental entry and doors were also restored. The new entry ramp on the back of the facility was designed to be compatible with adjacent pre-World War II buildings.

JUROR COMMENTS:

- *Exceptional adaptive reuse of an historic facility*
- *Beautiful details – especially rotunda ceiling*
- *Interior restoration is true to Art Deco style*
- *Good use of natural light*
- *Excellent design given constraints of historic building*

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Col John Allen (Chair)
Chief, Programs Division
Office of the Air Force Civil Engineer
Washington, DC

Mr. George Vaughn, AIA, LEED® AP
RVK Architects
San Antonio, TX

Mr. Tom Cochran, RA, LEED® AP
Air Force Center for Engineering and the Environment
Construction Management Division
San Antonio, TX

Lt Col Charles Yale, RA
Air Force Center for Engineering and the Environment
Technical Division
San Antonio, TX

Planning/Urban Design/Landscape Design Sub-Jury

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Air Force Center for Engineering and the Environment
San Antonio, TX

Ms. Stephanie Velasquez
San Antonio Metropolitan Planning Organization

Mr. Jim Gray, FASLA
Rialto Studio
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South Texas Veterans Health Care System
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Ms. Sandra W. Warner, IIDA
Air Force Center for Engineering and the Environment
Interior Designer
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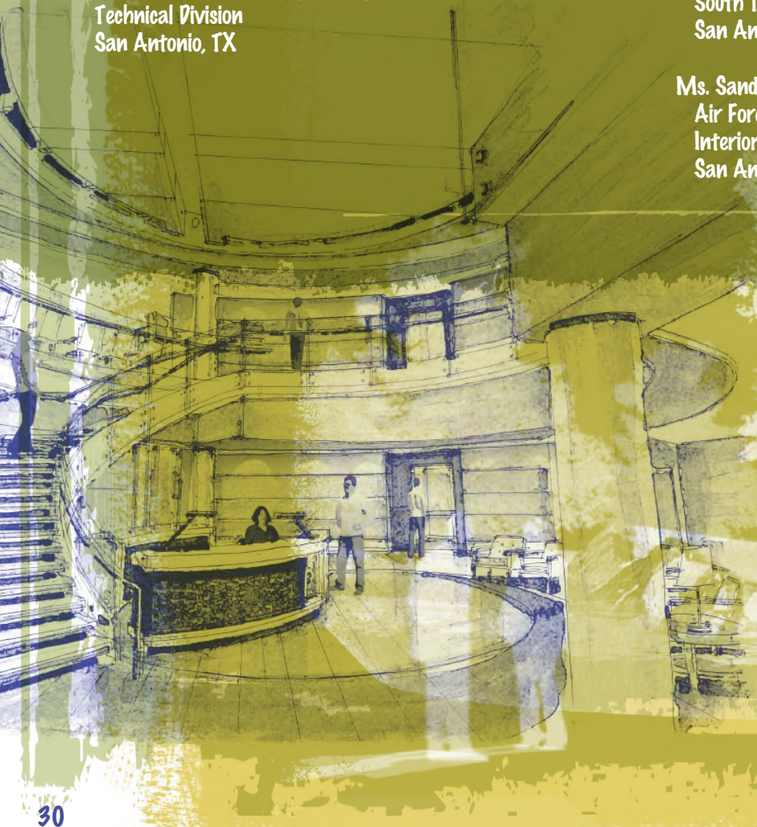

Acknowledgments

Major General Timothy A Byers
The Civil Engineer

The Air Force Center for Engineering and the Environment prepared this Annual Report

Terry G. Edwards
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HOK Visual Communications
Graphic Design
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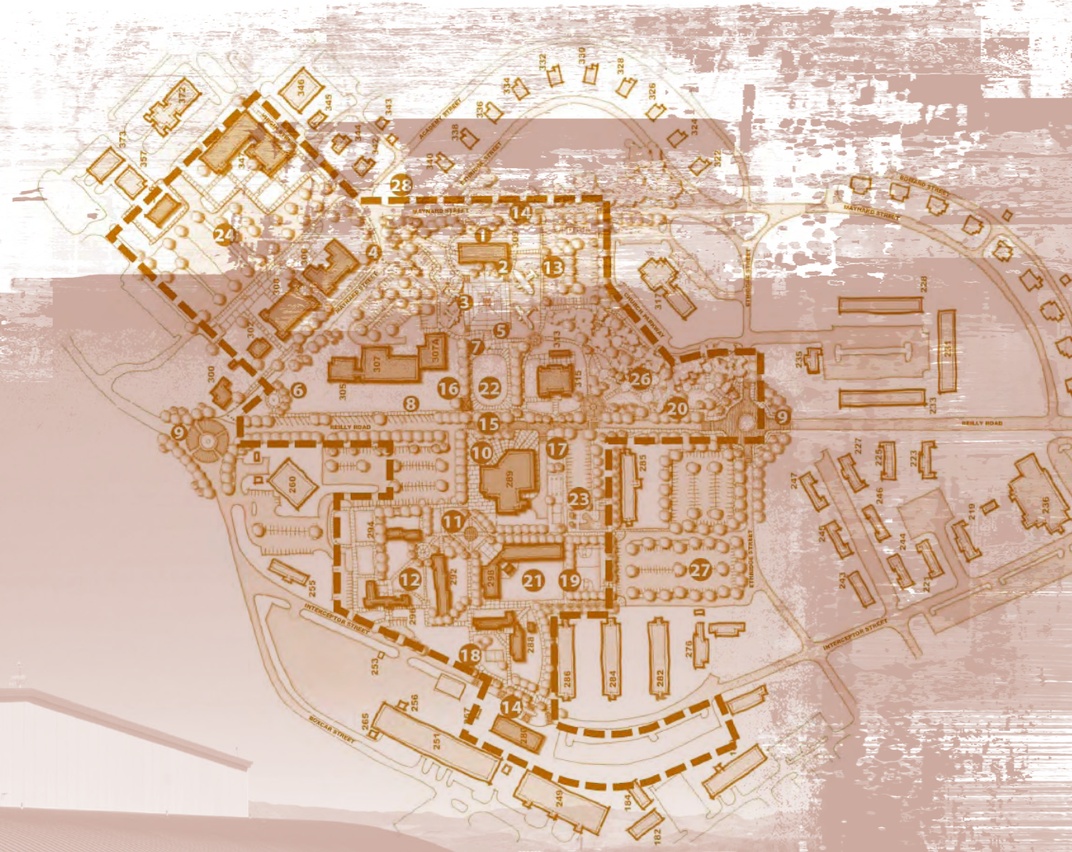

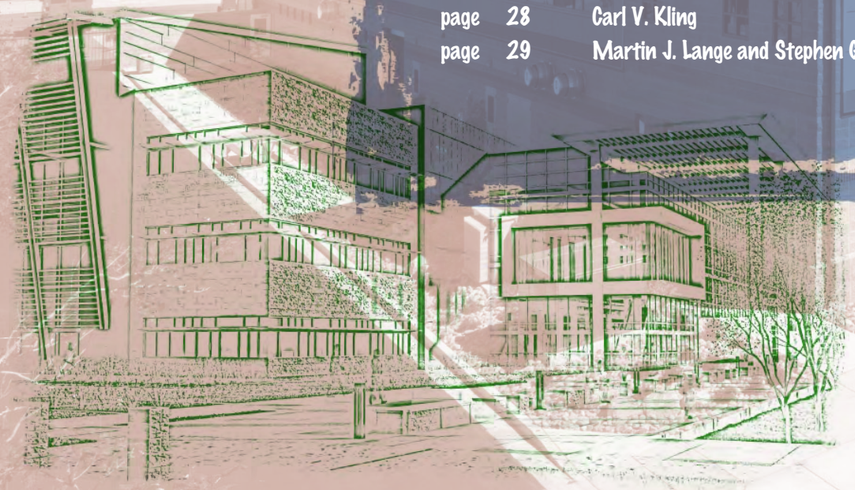

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