



FACILITIES AND INSTALLATION DEVELOPMENT

Fort Carson 25-Year Goals for Facilities and Installation Development

Attendees of the Fort Carson Installation Sustainability Workshop, which convened on 4-6 September 02, developed the following long-range goals:

All Buildings on Fort Carson will meet the Platinum Standard.

Total water purchased from outside sources will be reduced by 75% from 2001 baseline.

Integrated, comprehensive Fort Carson Master Plan will be prepared and implemented (to include local stakeholders). Regular input to and modification of the plan through Planning Board meetings.

The primary issues and goals discussed in the Facilities and Installation Development working group are described below. This information will be helpful in developing the short-term objectives and five-year plans needed to reach the long-range goals.

Breakout Group Membership

Facilitator: Mr. Ron Webster

Recorder: Ms. Elizabeth Keysar

Rank	Name	Organization
Mr.	Morey Bean	Colorado Architecture Partnership
Mr.	Steve Bello	Architect, DPW – Fort Carson
Mr.	Dan Benecke	Consulting – Walsh E&E
Ms.	Jana Brooks	DECAM – Fort Carson
Mr.	Dennis Calbreath	Master Planner – FORSCOM
Mr.	Chris Chapman	DPW – Fort Carson
Ms.	Pam Cowen	Historical Archeologist, DECAM – Fort Carson
Mr.	Dean Dunn	Environmental, USAF – Peterson Air Force Base
Mr.	John Esson	Master Planner/ECAS – ECW Environmental Group
Mr.	Jim Flores	
Mr.	Don Fuhrman	DPW – Fort Carson
Mr.	Larry Harlin	Installation Security – Fort Carson
Mr.	Jerry Jones	DCA – Fort Carson
Mr.	Bob Jordan	Architecture, Wilson and Company
Mr.	Malcolm McLeod	HQ USACE
Ms.	Patricia Miller	DPW – Fort Carson
Ms.	Linda Moeder	Geographic Info Systems, DECAM – Fort Carson
Mr.	Tad Noll	Transportation Planner - City of Colorado Springs



FACILITIES AND INSTALLATION DEVELOPMENT

Ms.	Ana Ortega	Master Planner, USACE – Fort Polk
Mr.	Richard Pilatzke	Water, DECAM – Fort Carson
Ms.	Robin Romero	FWS, DECAM – Fort Carson
Mr.	Doug Seiter	US DOE
Mr.	Marc Shereck	Consulting – URS
Mr.	Jack Schrup	Fort Macpherson
Mr.	Marck Slaughter	CERL
Ms.	Linda Smith	Energy – Governor’s Office of Colorado Springs
Mr.	Mark Tremmel	Architect
Mr.	Rik Wiant	Planner – Headquarters USACE

List of Issues and Potential Responses to Issues

Encroachment/Training Lands

- Air Quality as a potential encroachment issue (self-inflicted 3 kilometer buffer).
- Noise is a current encroachment issue.
- There are concerns related to availability of training land.
- Need for protection of training lands, and enhancement of training lands. Possible tools include: conservation easements, sprawl reduction, habitat protection in areas outside the post, buffer protection through JLUS, TDR lands initiative, farmland protection.
- Shrinking ‘buffer’ area. If this continues, will Fort Carson be able to accommodate new/future munitions and equipment?
- Air quality – especially smoke from training.
- Impact of mission ‘footprint’ on the community/region.

Transportation

- Lack of mass transit – nothing between city and the base, nothing on the base.
- Impacts related to personally operated vehicles (POVs) include: air quality deterioration, surface runoff, land use (sprawl and expanding cantonment footprint), force protection, social equity, health, conflicts with use of bikes/walking.
- The community of Fort Carson and the community outside are totally dependent upon POVs for transportation.
- Morning PT schedule promotes multiple car trips by soldiers each day.
- Need bus transit system with parking garages at the gates. POVs stay outside; use bicycles or other transportation inside.
- Need improved, enhanced use of telecommuting.

Energy

- Need to take advantage of alternate energy sources such as solar or wind.
- Need to consider alternative sources of energy to meet growing usage.



FACILITIES AND INSTALLATION DEVELOPMENT

- Need stable energy supply, and a stable energy cost. Need to reduce the total energy costs; conduct a cost-benefit analysis to include alternative sources.
- Multiple energy concerns including; energy impacts associated with water use, local transportation, new sources (high initial investment), and building design.
- Need education of building occupants in regards to high energy usage.
- Need metering and monitoring of energy and water use.
- Levels of energy consumption are high and getting higher each year.
- Need alternative energy sources (renewables, local distribution) to improve the energy security for Fort Carson.
- Poor energy management
- Can we use fuel cell generators (energy back-up)?
- Need to capitalize on the acres of roof surfaces at Fort Carson; photovoltaic power, rainwater collection, green roofs?

Solid Waste

- Large quantities of solid waste generated.
- Need to recycle more.
- Fort Carson is not recycling building materials from demolition.

Education and Awareness

- Need to standardize and include training on installation sustainability. Training needs a new emphasis.
- Need to incorporate sustainability ideas into Performance Plans.
- Need education on regulations, and improved negotiating ability with regulators.
- Need to enhance community involvement – mutual involvement and education (hands across the boundaries).
- Need to improve community awareness of environmental impacts, Fort Carson initiatives and to send the message that everyone has a role to play in sustainability.

Planning

- Fort Carson master plan is 10 years old, and based on even older data. Needs to be updated.
- Consider off-site post housing.
- Need to improve the walk-ability of post neighborhoods.
- Growth needs to be directed in coordinated, logical fashion. Utilize functional land use groupings, and connect pieces together to form a whole. Evaluate space requirements and building materials for energy conservation. Introduce shared parking lots, or multi-use parking lots. Improve vehicle and pedestrian circulation.
- Properly staff master planning.
- Invasive species/noxious weeds are a problem in the cantonment; use of chemical is controversial and costly.
- Incorporate community farming /gardening and other cultural activities into facilities planning.
- Need to address “Quality of Life” concerns.
- Shrinking open space on and off Fort Carson is an issue.



FACILITIES AND INSTALLATION DEVELOPMENT

- Currently building new facilities that are energy efficient under funding restraints.
- Need funding to provide metering for existing facilities to monitor energy use.
- Need master planning that makes it easy to choose alternative modes of transportation.
- Site development needs to be part of the master plan considerations.
- Potential use of open space for stormwater containment, recharging the aquifer, retention of water, and to moderate building footprint impacts, as well as to provide open space and habitat.
- Issue noted: construction impact to natural environment and wildlife.
- Need to plan so there are fewer NEPA “emergencies.”
- Need to improve funding of environmental documents (i.e. NEPA), including identifying proponenty.
- Aging infrastructure.

Water Consumption

- Concerns related to the availability of a water source were noted.
- Water consumption is wasteful; there are few re-use or recycling efforts.
- Need to enhance water conservation.
- Need to recycle and reduce consumption (xeriscaping), to improve utilization efficiency.
- Need to explore natural stormwater treatment for cost containment and community support purposes.
- More xeriscaping in times of drought.
- Fort Carson needs to lower water consumption, conservation – clean water campaign.

MILCON and Privatization

- Need building material and re-use guidelines and investment strategies.
- Building revitalization as a sustainability opportunity: reduce energy use, xeriscape, reduce maintenance and operating costs, improve morale and aesthetics.
- Encourage re-use of structures and existing built spaces.
- Building new facilities that are energy efficient (under funding constraints).
- Consider life-cycle costs of facilities.
- Long-term R.O.I. is not expedients in political climate (pork barrel).
- Buildings need to be tied to the master plan.
- Perform a functional assessment of facilities to evaluate quality of life issues and pollution reduction.
- Need more sustainable housing, reduce energy consumption. (Consider building design).
- Need funding for sustainable design and construction – through the MILCON 1391 document.
- Need to consider life cycle costs for facilities, extend the concept of the useful life of a structure. Fort Carson needs to take a holistic approach: design for longer term, design for microclimate and use what the area provides.
- How to overcome initial cost constraints in materials and construction.
- Need more climate responsive design for energy stability.
- Funding for sustainability?
- Privatization is causing environmental compliance issues (especially J.A. Jones). It is important to educate the private sector on federal compliance requirements.
- Need “smart” contracting.



FACILITIES AND INSTALLATION DEVELOPMENT

Initial Goals and Proponents Developed

Initial Strategic Goal 1

- **Issue:** Discharge of wastewater, little re-use, inefficient water consumption, need for sustainable regional water source solutions.
- **Desired End State:** Water consumption reduced by 75% from 2001 baseline.
- **Metric:** volume of water consumed (gallons pre capita per day)
- **Timeframe:** 2027
- **Proponent Organization:** DPW, DECAM, EQWG, DCA

Initial Strategic Goal 2

- **Issue:** Ineffective implementation of comprehensive planning, lack of consideration of community and regional land use issues, fragmented development and planning procedures, infrastructure upgrade issues.
- **Desired End State:** 100% implementation of an integrated, comprehensive planning and development process (to include currently exempt areas) based on sustainability principles.
- **Metric:** All projects go through a planning board review
- **Timeframe:** by 2006
- **Proponent Organization:** Garrison Commander

Initial Strategic Goal 3

- **Issue:** Life cycle and sustainability consideration not reflected in building/facility design, renovation, construction. Decisions based on first-cost. Contracting and privatization do not adhere to sustainability principles.
- **Desired End State:** All building and facility renovation, design and construction meet platinum rating.
- **Metric:** LEED, SPiRiT
- **Timeframe:** 2027
- **Proponent Organization:** DPW

Initial Strategic Goal 4

- **Issue:** Solid (C&D) waste.
- **Desired End State:** Zero C&D waster landfilled
- **Metric:** tons of waste landfilled
- **Timeframe:** 2027 (75% reduction by 2005)
- **Proponent Organization:** DECAM, EQWG

Initial Strategic Goal 5

- **Issue:** Lack of awareness of sustainability principles and implications. Lack of institutional, community and individual responsibility and accountability of environmental impacts.



FACILITIES AND INSTALLATION DEVELOPMENT

- **Desired End State:** Environmentally educated and environmentally responsible citizens.
- **Metric:** 100% participation in appropriate sustainability programs (awareness, education and accountability).
- **Timeframe:** 2003 (continuous)
- **Proponent Organization:** DECAM

Initial Strategic Goal 6

- **Issue:** Energy security, lack of alternative energy sources, inefficient energy usage, lack of metering and monitoring, energy issues not addressed in planning and design, need for contingency planning.
- **Desired End State:** Secure, sustainable energy resources for Fort Carson
- **Metric:** no shortfalls
- **Timeframe:** continuous
- **Proponent Organization:** EQWG

Initial Strategic Goal 7

- **Issue:** Reliance on POV, no viable alternatives to the POV, infrastructure limitations, reliance on fossil fuels.
- **Desired End State:** Viable, integrated, sustainable transportation options (mass transit, bicycle, EVs, telecommuting, etc.) to reduce number of POV miles by 75%
- **Metric:** number of POV miles
- **Timeframe:** 2027
- **Proponent Organization:** DOL

Initial Strategic Goal 8

- **Issue:** Encroachment, constraints on training land use, land area restrictions, noise and air quality concerns
- **Desired End State:** Adequate training land and air space
- **Metric:** Unit readiness, lost training days
- **Timeframe:** continuous
- **Proponent Organization:** G3



FACILITIES AND INSTALLATION DEVELOPMENT

Final Goals and Team Members

Final Facilities Goal

All Buildings on Fort Carson will meet the Platinum Standard.

- **Issue:** Life cycle and sustainability considerations not reflected in building/facility design, renovation, construction. Decisions based on first-cost. Contracting and privatization programs do not adhere to sustainability principles.
- **Desired End State:** Buildings at Fort Carson are planned, funded, constructed and maintained according to sustainability principles.
- **Metric:** LEED, SPiRiT
- **Timeframe:** 2027 (within phased increments developed by sustainability teams)
- **Proponent Organization:** DPW
- **Team Members:**
 - DECAM
 - J.A. Jones
 - Home Builders Association
 - AAFES
 - DOC
 - DCA
 - USACE
 - USARC
 - National Guard
 - All other tenants
 - U.S. Green Building Council
 - Colorado Springs Utilities
 - School District 8
 - Colorado Sustainable Business Network
 - Colorado Environmental Coalition
 - DeCA



FACILITIES AND INSTALLATION DEVELOPMENT

Final Water Goal

Total water purchased from outside sources will be reduced by 75% from 2001 baseline.

- **Issue:** Discharge of wastewater, small quantity of re-use, inefficient water consumption, need for sustainable regional water source solutions, and water use in landscaping.
- **Desired End State:** Fort Carson's water use is sustainable within the resources limitations of the region.
- **Metric:** net inflow (potable and non-potable)
- **Timeframe:** 2027 (within phased increments developed by sustainability team)
- **Proponent Organization:** DPW
- **Team Members:**
 - DECAM
 - Colorado Springs Utilities
 - DCA
 - City of Colorado Springs
 - El Paso, Pueblo, Las Animas and Fremont Counties
 - USACE
 - City of Trinidad
 - Regulatory Agencies



FACILITIES AND INSTALLATION DEVELOPMENT

Final Planning Goal

Integrated, comprehensive Fort Carson Master Plan will be prepared and implemented (to include local stakeholders). Regular input to and modification of the plan through Planning Board meetings.

- **Issue:** Ineffective implementation of comprehensive planning, lack of consideration of community and regional land issues, fragmented development and planning procedures, infrastructure upgrade concerns, need for buffers to protect training areas, ability to train the Objective Force.
- **Desired End State:** 100% implementation of an integrated, comprehensive, long-range planning and development process (to include training ranges, buffer zones, and currently exempt programs) based on sustainability principles.
- **Metric:** All projects go through Planning Board Review and proceed in accordance with Master Plan and Regional Plan.
- **Timeframe:** 2006 (continuous)
- **Proponent Organization:** DPW
- **Team Members:**
 - El Paso, Pueblo, Las Animas and Fremont Counties
 - Regional Environmental Office
 - USACE
 - Colorado Springs Planning and Public Works
 - Pikes Peak Area Council of Governments
 - All Directorates at Fort Carson
 - Colorado State Department of Local Affairs
 - WREO
 - Northwest Regional Office (IMA)