



DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS UNITED STATES AIR FORCE  
WASHINGTON, DC

2 JUN 2011

MEMORANDUM FOR SEE DISTRIBUTION

FROM: HQ USAF/A7C  
1260 Air Force Pentagon  
Washington, DC 20330-1260

SUBJECT: Air Force Sustainable Design and Development (SDD) Implementing Guidance

This memorandum reinforces the Air Force commitment to incorporate sustainable concepts in the planning, programming, design, construction, and operation of facilities and infrastructure. Beginning with FY12 and *regardless of funding source*, all permanent construction activity on Air Force installations in the United States (including Alaska and Hawaii) and its territories on permanent Active Air Force installations, resulting in Air Force Real Property Assets, shall comply with the requirements of this memorandum. This policy shall apply to overseas construction activities to the extent practical, considering mission objectives, and Host Nation agreements. The requirements of the following directives are incorporated into this memorandum:

- Executive Order (EO) 13327, Federal Real Property Asset Management, 6 Feb 04
- Public Law 109-58, Energy Policy Act (EPAct) 2005, 8 Aug 05
- Federal Leadership in High Performance and Sustainable Buildings Memorandum of Understanding and Guiding Principles, 24 Jan 06
- EO 13423, Strengthening Federal Environmental, Energy, and Transportation Management, 26 Jan 07
- Public Law 110-140, Energy Independence and Security Act (EISA) of 2007, 19 Dec 07
- EO 13514, Federal Leadership in Environmental, Energy, and Economic Performance, 8 Oct 09
- ~~Deputy Under Secretary of Defense (Installations and Environment) Memorandum, 19 Jan 10, Subject: DoD Implementation of Storm Water Requirements under Section 438 of the Energy Independence and Security Act (EISA)~~
- Deputy Under Secretary of Defense (Installations and Environment) Memorandum, 25 Oct 10, Subject: Department of Defense Sustainable Buildings Policy
- 10 CFR Part 433, Energy Efficiency Standard for the Design and Construction of New Federal Commercial and Multi-Family High Rise Residential Buildings
- 10 CFR Part 436, Subpart A – Methodology and Procedures for Life Cycle Cost Analyses
- FY12 Defense Planning and Programming Guidance

The following sustainability requirements apply to the Air Force Construction program:

- a. All new vertical construction, and major renovations<sup>1</sup> (Restoration & Modernization), **meeting the USGBC LEED 2009 Minimum Program Requirements (MPRs)** (see attachments 1 and 2)– All facilities in this category shall fully incorporate Federal

<sup>1</sup> For the purposes of this memorandum, a major renovation project is defined as changes to a building that provide significant opportunity for substantial improvement in the sustainable design elements of the building, including energy efficiency, as determined by the signatory of the DD Form 1391. For major renovation projects seeking formal LEED certification, criteria established in the MPRs and the LEED Reference Guide must also be met.

requirements for High Performance and Sustainable Buildings (HPSB) (see attachment 3); shall be registered in USGBC LEED-Online; *shall be formally certified and achieve at a minimum LEED Silver certification* (or meet a comparable level of achievement with an overseas third-party green building rating system); and shall achieve not less than 20 points (40 percent of the Silver point threshold) dedicated toward energy efficiency and water conservation.

b. All new vertical construction, and major renovations (R&M), **not meeting the USGBC LEED 2009 MPRs**, shall fully incorporate the Federal requirements for HPSBs and shall pursue LEED credits (or credits in an equivalent overseas third-party green building rating system), relevant to the scope of the project, to the maximum extent practicable (see attachment 3). For horizontal, utility, and industrial projects, attachments 4, 5, and 6 have been provided as guidance to indicate appropriate thresholds of compliance with this memorandum. The project types are defined in ETL 08-13, *Incorporating Sustainable Design and Development (SDD) and Facility Energy Attributes in the Air Force Construction Program* as:

- Vertical – Includes typical building construction for which LEED-NC was developed as a metric
- Horizontal – Includes site development, heavy earthwork, construct and repair roads, runways, taxiways, aircraft aprons, containment, sidewalks, parking lots, revetments, curbs, and gutters
- Utility - Includes electric, gas, water, steam, and wastewater, including substations, lift stations, oil/water separators, storage tanks, petroleum, oil, lubricants (POL) lines, and transformers
- Industrial – Includes all enclosed facilities for which mechanical cooling/heating is provided for less than 50 percent of the building square footage

The following paragraphs apply to all projects subject to the requirements of paragraphs a and b above, and other construction activities noted herein.

Apply life cycle cost criteria as specified in 10 CFR 436 Subpart A - Methodology and Procedures for Life Cycle Cost Analyses; EO 13327, Federal Real Property Asset Management; AFI 32-1021, Planning and Programming Military Construction (MILCON) Projects; and AFI 32-1032, Planning and Programming Appropriated Funded Maintenance Repair and Construction Projects, as appropriate.

As a continuation of the Air Force commitment to low impact development, implement the DUSD (I&E), DoD Implementation of Storm Water Requirements under Section 438 of Energy Independence and Security Act (EISA) policy for FY11 O&M and MILCON projects (see attachment 7 for implementing guidance). In exceptional circumstances where project considerations may affect the practicability of implementing the DoD guidance in FY11 O&M projects and FY11 or FY12 MILCON projects, low impact development design strategies will continue to be consistent with existing applicable Air Force design guidance.

The requirements of this memorandum are not optional. Sustainable elements necessary to comply with this memorandum cannot be eliminated to save scope or cut cost. The DD Form 1391 shall include the scope and the cost estimate to achieve the requirements of this memorandum. A separate line item entitled “SDD, EPA05, EO 13423, EISA 438, and EO 13514” shall list the scope and estimated cost. In lieu of a cost estimate, an allowance, not exceeding 2 percent of the total construction cost, may be identified on the DD Form in the “SDD, EPA05, EO 13423, EISA 438, and EO 13514” line item.

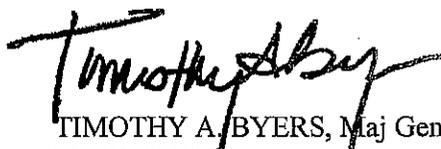
For MILCON projects, a Federal government employee of the design/construction agent (as the Owner's Agent) and the BCE, or his/her designee (as the Owner) shall sign the LEED Project Registration Agreement and the LEED Certification Agreement as appropriate.

The Air Force MILCON Sustainability Requirements Reporting Scoresheet (attachment 3) shall be used for reporting Air Force compliance with the Federal HPSB requirements and LEED status, of all MILCON project types listed in paragraphs a and b of this memorandum. AFCEE MILCON Project Managers shall send the Air Force MILCON Sustainability Requirements Reporting Scoresheet to [AFCEE.TDB.MILCONrptg@us.af.mil](mailto:AFCEE.TDB.MILCONrptg@us.af.mil), at: 1) the initial design charrette; 2) the RFP/35 percent design; 3) design complete; and 4) construction complete phases of all MILCON projects addressed by this memorandum. Any decisions based on cost constraints leading to deletion of sustainable concepts, or certification of the project, shall be included in the documentation. At the completion of the project provide HPSB status information to the installation Civil Engineering office for the purpose of updating the ACES-RP, RPA Sustainability Code field.

Specific roles and responsibilities in support of this memorandum are:

ORGANIZATION	ROLES AND RESPONSIBILITIES
HQ USAF/A7C	Development and dissemination of sustainable development policy. POC: Gene Gallogly, AF/A7CA, <a href="mailto:thomas.gallogly@us.af.mil">thomas.gallogly@us.af.mil</a> Development and dissemination of MILCON program policy. POC: Robert Gill, AF/A7CP, <a href="mailto:robert.gill@us.af.mil">robert.gill@us.af.mil</a>
AFCEE	Provide guidance documents and technical support, to include planning, design criteria, the delivery process, and general guidance on sustainability and LEED certification. POC: Paula Shaw, AFCEE/TDBS, <a href="mailto:paula.shaw@us.af.mil">paula.shaw@us.af.mil</a>
AFCESA	Provide guidance documents and technical support to include engineering criteria, construction standards, life cycle and sustainable costs, and operations and maintenance issues. POC: Clifford Fetter, AFCESA/CEOA, <a href="mailto:clifford.fetter@us.af.mil">clifford.fetter@us.af.mil</a>
	Provide guidance documents and technical support to include energy and water conservation, and renewable energy technologies. POC: Ken Walters, AFCESA/CEN, <a href="mailto:kenneth.walters.1@us.af.mil">kenneth.walters.1@us.af.mil</a>

As new LEED rating systems are introduced by USGBC, AFCEE and AFCESA will evaluate the potential for incorporation into the Air Force Construction Program and will forward recommendations to HQ USAF/A7C for guidance update consideration.



TIMOTHY A. BYERS, Maj Gen, USAF  
The Civil Engineer  
DCS/Logistics, Installations & Mission Support

7 Attachments:

1. LEED 2009 Minimum Program Requirements (MPR)
2. LEED 2009 MPR Supplemental Guidance
3. Air Force MILCON Sustainability Requirements Reporting Scoresheet, LEED 2009
4. Guidance on Applying LEED Principles to Air Force Horizontal Construction Projects
5. Guidance on Applying LEED Principles to Air Force Utility Construction Projects
6. Guidance on Applying LEED Principles to Air Force Industrial Construction Projects
7. Implementing Guidance to Meet EISA 2007 Section 438 Requirements

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