

# **USACE Army LEED<sup>®</sup> v4 Implementation Guide**

September 2014

Headquarters, U. S. Army Corps of Engineers

**Table of Contents:**

- 1. Purpose. .... 6
- 2. Applicability. .... 6
- 3. Background. .... 6
- 4. Army LEED Requirements. .... 7
  - 4.1. GENERAL.....7
  - 4.2. APPLICABLE VERSION OF LEED-BD+C.....7
  - 4.3. MINIMUM REQUIREMENT - NEW FACILITIES IN THE US AND ITS TERRITORIES. ....7
  - 4.4. MINIMUM REQUIREMENT – MAJOR RENOVATIONS IN THE US AND ITS TERRITORIES. ..7
  - 4.5. MINIMUM REQUIREMENT –FAMILY HOUSING IN THE US AND ITS TERRITORIES.....8
  - 4.6. MINIMUM REQUIREMENT – OTHER CONSTRUCTION IN THE US AND ITS TERRITORIES. 8
  - 4.7. USE OF OTHER RATING TOOLS IN THE US AND ITS TERRITORIES.....8
  - 4.8. MINIMUM REQUIREMENT – CONSTRUCTION OUTSIDE THE US AND ITS TERRITORIES. .9
  - 4.9. FAILURE TO MEET REQUIREMENTS – ARMY USER.....9
  - 4.10. FAILURE TO MEET REQUIREMENTS – NON-ARMY TENANT USER.....9
- 5. LEED Responsibilities. .... 10
  - 5.1. HQ USACE SDD POCs. ....10
  - 5.2. MSC SDD POCs.....10
  - 5.3. DISTRICT SDD POCs. ....10
- 6. Using the LEED BD+C Rating Tool. .... 11
  - 6.1. SCORING PROJECTS WITH LEED. ....11
  - 6.2. INTEGRATED DESIGN. ....11
  - 6.3. LEED ACCREDITED PROFESSIONAL.....11
  - 6.4. LEED INTERPRETATIONS AND ADDENDA DATABASE.....11
  - 6.5. LEED INNOVATION (ID) AND PILOT CREDITS.....11
  - 6.6. LEED REGIONAL PRIORITY CREDITS.....12
  - 6.7. LEED PROJECT BOUNDARY.....12
  - 6.8. CAMPUS PROJECTS (MULTIPLE BUILDINGS ON A SHARED SITE). ....12
  - 6.9. CENTRAL ENERGY PLANTS.....13
- 7. Relation of LEED to Federal and Army SDD Mandates. .... 14
  - 7.1. GENERAL.....14
  - 7.2. FEDERAL ENERGY MANDATE COMPLIANCE.....14
  - 7.3. ARMY WASTE DIVERSION MANDATE COMPLIANCE.....14

- 8. LEED Certification..... 15
  - 8.1. GENERAL.....15
  - 8.2. REQUIRED LEED CERTIFICATIONS.....15
  - 8.3. DESIGN REVIEW. ....15
  - 8.4. CERTIFICATION AND PROJECT CLOSEOUT. ....16
  - 8.5. CERTIFYING CAMPUS PROJECTS. ....16
  - 8.6. CERTIFICATION FEES.....16
  - 8.7. OWNER AND CHANGE OF OWNER AT CERTIFICATION.....16
- 9. Project Registration. .... 17
  - 9.1. GENERAL.....17
  - 9.2. LEED VERSION 2.2 & 2009 PROJECT REGISTRATION. ....17
  - 9.3. LEED v4 PROJECT REGISTRATION. ....17
  - 9.4. METHOD OF PROVIDING POST-OCCUPANCY UTILITY DATA .....18
  - 9.5. REGISTRATION FEES.....18
  - 9.6. REGISTERED PROJECT ADMINISTRATION.....18
  - 9.7. HOW TO REGISTER A PROJECT.....18
- 10. Project Documentation..... 19
  - 10.1. GENERAL.....19
  - 10.2. LEED ONLINE. ....19
  - 10.3. LEED DOCUMENTATION. ....19
  - 10.4. AUDIT DOCUMENTATION.....20
  - 10.5. LEED SILVER EXEMPT BUILDINGS.....20
  - 10.6. GOVERNMENT SUBMITTALS AND LEED CERTIFICATION SUBMITTALS.....20
- 11. Government Validation..... 21
  - 11.1. GOVERNMENT VALIDATION. All.....21
  - 11.2. COORDINATION AND ENDORSEMENT.....21
  - 11.3. GOVERNMENT VALIDATION AND LEED CERTIFICATION.....21
  - 11.4. HQUSACE VALIDATION PROGRAM.....21
- 12. Reporting..... 22
  - 12.1. PROJECT MANAGER RESPONSIBILITY.....22
  - 12.2. PRESCRIBED REPORTING POINTS AND DOCUMENTATION.....22
  - 12.3. P2 REPORTING.....22
- 13. Initial Project Programming/Planning Charrette. .... 24
  - 13.1. LEED TRAINING.....24
  - 13.2. LEED PROJECT STRATEGY AND SCORECARD.....24

13.3.	PROGRAMMING SDD COSTS.....	24
13.4.	FAILURE TO MEET REQUIREMENTS.....	24
13.5.	PRESCRIBED REPORTING POINT.....	24
14.	Code 3 Design/Parametric Estimating Using ENG Form 3086.....	25
14.1.	CODE 3.....	25
14.2.	LEED PROJECT SCORECARD.....	25
14.3.	VALIDATING SDD COSTS.....	25
14.4.	FAILURE TO MEET REQUIREMENTS.....	25
14.5.	PRESCRIBED REPORTING POINT.....	25
15.	Design-Build (DB) Request for Proposal.....	26
15.1.	GENERAL.....	26
15.2.	RFP WIZARD.....	28
15.3.	CONFLICTS.....	28
15.4.	TECHNICAL PROPOSAL REVIEW.....	28
15.5.	PRESCRIBED REPORTING POINT.....	28
15.6.	FAILURE TO MEET REQUIREMENTS.....	28
16.	Design.....	29
16.1.	DB POST AWARD CONFERENCE/DBB PRE-DESIGN CONFERENCE.....	29
16.2.	DESIGN DOCUMENTS.....	29
16.3.	LEED SUPPORTING DOCUMENTATION.....	29
16.4.	DESIGN REVIEWS AND CREDIT AUDITS.....	29
16.5.	FINAL DESIGN SUBMITTAL.....	29
16.6.	PRESCRIBED REPORTING POINT (DBB PROJECTS).....	29
16.7.	CERTIFICATION PROJECTS (DESIGN REVIEW).....	30
16.8.	TRANSFER TO CONSTRUCTION CONTRACTOR.....	30
16.9.	FAILURE TO MEET REQUIREMENTS (DBB PROJECTS).....	30
17.	Construction.....	31
17.1.	PRECONSTRUCTION CONFERENCE.....	31
17.2.	LEED SUPPORTING DOCUMENTATION.....	31
17.3.	USACE CONSTRUCTION AGENT.....	31
17.4.	CONTRACTOR NON-COMPLIANCE.....	31
17.5.	BENEFICIAL OCCUPANCY.....	31
17.6.	CERTIFICATION PROJECTS (FINAL REVIEW AND CERTIFICATION).....	32
17.7.	CONSTRUCTION CLOSEOUT.....	32
18.	Army LEED BD+C Credit Guidance and Resources.....	33

18.1. ENERGY AND WATER EMPHASIS..... 33  
18.2. REQUIRED CREDITS..... 33  
18.3. PREFERRED CREDITS..... 34  
18.4. ADDITIONAL INFORMATION AND RESOURCES..... 34  
19. RFP Sample Text..... 34  
20. Sample LEED v4 Scorecard..... 34  
21. Training..... 34  
22. Frequently Asked Questions (FAQs)..... 34  
23. Glossary..... 34  
24. Waivers..... 34  
25. LEED Registration of Army Projects..... 34

APPENDICES:

Appendix A – Army LEED Credit Guidance and Resources..... 35  
Appendix B – RFP Sample Text (Design/Build, Single Contractor)..... 39  
Appendix C – Sample LEED v4 Scorecard..... 40  
Appendix D – Training..... 42  
Appendix E – Frequently Asked Questions (FAQs)..... 43  
Appendix F – Glossary..... 47  
Appendix G – LEED Registration..... 54  
Appendix H – Waivers..... 57

## **United States Army Corps of Engineer (USACE) Army Leadership Energy and Environmental Design (LEED)<sup>®</sup> v4 Implementation Guide**

1. **Purpose.** This implementation guidance is to assist USACE Project Delivery Teams (PDTs) in implementing LEED<sup>®</sup> v4 to meet the Army's third-party certification policy. Other federal and Department of Army (DA) sustainable design and development (SDD) requirements are not addressed in this document.
2. **Applicability.** This implementation guidance applies to USACE-executed new construction, add/alter and renovation and projects located on Army property. Paragraphs 5 through 16 address USACE processes for implementing LEED v4 and are applicable to all USACE projects pursuing LEED v4 certification, including Civil Works projects. While early implementation of LEED v4 is encouraged, LEED v4 is not yet required on a given program year. Usually this is not mandated, but simply the result of USGBC "sunsetting" previous versions. This guide does not intend to change that dynamic. PDTs may pursue "early" LEED v4 certification, within the financial and criteria constraints of their projects.

This document incorporates all Army and USACE LEED guidance up to the Army 16 December 2013 SDD policy update. It has been coordinated with and approved by Army Chief of Staff for Installation Management (ACSIM). This document includes LEED documentation and interpretation guidance that reflects current guidance from U.S. Green Building Council (USGBC) and Green Building Certification Institute (GBCI) as of the date of this publication. This document provides guidance [in brackets] for Air Force (AF) projects. Be sure to check with the AF project manager (PM) for any updated information.

For work with other agencies, this document may be used as applicable for logistical guidance related to registration and certification procedures in relation to LEED v4, but consult with your agency proponent for LEED certification requirements.

3. **Background.** The Sustainable Project Rating Tool (SPiRiT) was implemented as the Army's sustainable design rating tool in 2001. The USGBC Leadership in Energy and Environmental Design – Building Design & Construction (LEED BD+C) rating tool replaced SPiRiT effective with the fiscal year 2008 (FY08) Military Construction Army (MCA) program, except Army Family Housing (AFH) projects, which continued to be rated using SPiRiT through the fiscal year FY12 program. Generally the term "LEED" (without further designation), as used in this document, refers to LEED BD+C. Links to the documents referred to in this guidance can be found at "Appendix A – Army LEED Credit Guidance and Resources." The Army is a member of the USGBC and all civilian employees of and uniformed members of the Army qualify for all member discounts and benefits. See "Appendix E – Frequently Asked Questions (FAQs)" for more information on membership.

#### 4. **Army LEED Requirements.**

4.1. **GENERAL.** Except where indicated otherwise, these requirements apply worldwide to all facility construction activities on Army installations (including government owned/contractor operated installations and tenant activities) regardless of funding source. This includes permanent Active Army installations, Army Reserve, Army Readiness Centers, Army National Guard Facilities and Armed Forces Reserve Centers, Base Realignment and Closure (BRAC) projects, Sustainment, Restoration, and Modernization (SRM) projects and non-Army tenant facilities on Army property. For tenant projects on Army property, USACE project Master Planner and PM will make the tenant organization aware of Army LEED requirements and the tenant responsibility to coordinate directly with the installation Department of Public Works (DPW) if the requirements cannot be met. These requirements apply to permanent facility construction only.

*4.1.1.* Excluded are overseas contingency construction, DoD Medical (DoDM) funding, privatization initiatives and continental United States (CONUS) interim facilities. However, overseas contingency construction and CONUS interim facilities should incorporate as many sustainability features as life cycle cost effective - especially passive sustainability measures.

4.2. **APPLICABLE VERSION OF LEED-BD+C.** Requirements apply regardless of which version of LEED BD+C is used to execute a project. Projects shall be executed using the version of LEED under which they are registered.

4.3. **MINIMUM REQUIREMENT - NEW FACILITIES IN THE UNITED STATES AND ITS TERRITORIES.** Starting with the FY08 program, all new facilities with mechanical climate-control for human comfort that were to be registered under LEED (version varies) and all new facilities that meet the LEED BD+C (or LEED-NC) Minimum Program Requirements (associated with the LEED version the project is registered) will achieve the LEED BD+C or LEED-NC SILVER level. Starting with the FY13 program, all new facilities meeting the LEED BD+C Minimum Program Requirements shall be certified at the Silver level by GBCI. See paragraph 18 for specific LEED credits that are required. These requirements do not apply to Army Family Housing; see paragraph 4.5 for Army Family Housing requirements. [AF projects shall be certified at the LEED Silver level].

4.4. **MINIMUM REQUIREMENT – MAJOR RENOVATIONS IN THE UNITED STATES AND ITS TERRITORIES.** Major renovations will meet the same requirement as new facilities. A major renovation is defined as follows:

*4.4.1.* For FY12 program and earlier: These projects will most likely NOT be registered or certified under LEED v4. See previously-published versions of the LEED Implementation Guide for guidance on those projects. If a prior year project does need to pursue LEED v4 guidance, contact the HQ USACE SDD POC for additional guidance.

- 4.4.2. For the FY13 program and beyond: Major renovation is defined as changes to a building that provide significant opportunities for substantial improvement in the sustainable design elements of the building, including energy efficiency OR any renovation that exceeds \$7.5 million.
- 4.5. **MINIMUM REQUIREMENT – NEW ARMY FAMILY HOUSING IN THE UNITED STATES AND ITS TERRITORIES.** For the FY13 program and beyond, all new or major renovation Army Family Housing (AFH) shall be certified at the LEED for Homes (LEED-H) Silver level with a minimum of 15 energy points from the GBCI. New construction or major renovation of homes built under the Residential Communities Initiative (RCI) or other privatization initiatives shall achieve and be certifiable at the Silver level of the applicable LEED rating system (e.g., LEED BD+C, LEED for Homes, LEED ND). [Check with the AF for the correct accreditation system to use for AF housing projects].
- 4.6. **MINIMUM REQUIREMENT – OTHER CONSTRUCTION IN THE UNITED STATES AND ITS TERRITORIES.** Construction that does not meet the requirements of paragraph 4.3 - 4.5 above will be scored using LEED BD+C and incorporate sustainable design features to the maximum extent life cycle cost effective and technically possible, but will be exempt from the minimum LEED score that applies to new construction. Examples of this are horizontal construction (such as ranges, roads and airfields), buildings that do not meet LEED Minimum Program Requirements and renovation and repair projects that do not meet the above definition for major renovation. See ASA SDD policy paragraph 5.b.vi for more information. Supporting documentation of achievement will be developed, maintained, archived with project records and a copy turned over to the DPW [BCE].
- 4.7. **USE OF OTHER RATING TOOLS IN THE UNITED STATES AND ITS TERRITORIES.** Under LEED v4, LEED Core and Shell, LEED for Schools, LEED Retail, LEED for Healthcare, LEED for Data Centers, LEED for Hospitality and LEED for Warehouses and Distribution Centers has been combined under the LEED BD+C certification system heading. Achievement of the LEED Silver certification level under one of these sub-headings for applicable projects is considered equivalent to LEED BD+C Silver achievement and may be substituted without additional permission. Other LEED certification systems may be utilized (LEED Interior Design and Construction, LEED Building Operations and Maintenance, LEED Neighborhood Development, LEED Homes, etc) if they are determined to be the most appropriate system for the project. See the USGBC website at <http://www.usgbc.org/leed/certification/choose> for more information. Other green building rating tools may be substituted if demonstrated to achieve an equivalent level of performance in sustainable design and if approved. For Army users a waiver is required per paragraph 4.9, except a blanket waiver may be requested to allow the substitution on a wider basis. All projects that are approved to use another rating tool will develop supporting documentation of achievement in accordance with the approved rating tool requirements. [Check with the AF or other agency for use of other green building rating tools].



- 4.8. **MINIMUM REQUIREMENT – CONSTRUCTION LOCATED OUTSIDE THE UNITED STATES AND ITS TERRITORIES.** All projects will strive to meet the requirements for projects located within the United States and its territories and to achieve an equivalent level of performance in sustainable design. Projects should meet applicable LEED criteria and host nation criteria. Host nation criteria and rating tools may be used. Supporting documentation of achievement will be developed by the geographic district, maintained, archived with project records and a copy turned over to the DPW [BCE]. FY13 and beyond should refer to Assistant Secretary of the Army for Installations, Energy and the Environment (ASA-IEE) Policy Memo dated 16 Dec 2013.
- 4.9. **FAILURE TO MEET REQUIREMENTS – ARMY USER.** The LEED requirements contained in this implementation guide are considered criteria. If the PDT determines that a project cannot meet any individual LEED requirement within funds available or due to adverse mission, security, antiterrorism/force protection, health, safety or welfare impacts, the PM will submit a waiver request per the procedures in “Appendix H – Waivers.” This will be done as soon as the failure is known, but no later than the next Prescribed Reporting Point (paragraph 12.2). Coordinate all Installation and User change requests to ensure they do not cause the project to fail. If, at project completion, any LEED requirements that did not receive previous waiver approval are not achieved, the PM will prepare an After Action Report and forward it to the Division/Major Support Command (MSC) SDD Program Manager, HQ USACE SDD Proponent, Regional Integration Team (RIT) Program Manager and the Engineering and Construction (E&C) cost engineering POC with an explanation as to why this requirement was not achieved. The PM will also ensure that lessons learned on LEED failure are documented in the USACE Enterprise Lessons Learned (ELL) database found at <https://apps.usace.army.mil/sites/ELL/SitePages/Home.aspx>. [Check with the AF for guidance on submitting waiver requests if LEED criteria will not be met].
- 4.10. **FAILURE TO MEET REQUIREMENTS – NON-ARMY TENANT USER.** If the PDT determines that a project cannot meet LEED requirements within funds available, due to adverse mission, security, antiterrorism/force protection, health, safety or welfare impacts or if the tenant does not agree to the requirement (including requirement to certify), the PM will notify the tenant and facilitate the tenant’s coordination to obtain installation concurrence. This will be done as soon as the failure is known, but no later than the next Prescribed Reporting Point (paragraph 12.2). If, at project completion, any LEED requirements (except those that installation concurrence for deviation was obtained) are not achieved, the PM will prepare an After Action Report and forward it to the Regional Integration Team (RIT) Program Manager and the E&C cost engineering POC with an explanation as to why this requirement was not achieved. The PM will also ensure that lessons learned on LEED failure from the project are documented in the USACE Enterprise Lessons Learned (ELL) database which is currently warehoused online at <https://apps.usace.army.mil/sites/ELL/SitePages/Home.aspx>. [Check with the AF for guidance on submitting waiver requests if LEED criteria will not be met].

## 5. LEED Responsibilities.

- 5.1. HQ USACE SDD POCs. Establish HQ USACE SDD policy and implementation guidance. Provide recommendations on waiver requests to other HQ USACE offices. Provide SDD training opportunities. Establish communication channels with MSC SDD POCs. Provide answers to MSC SDD POC questions on policy. Provide answers to MSC SDD POC technical questions or direct MSC SDD POCs to centers of expertise. Collect results of MSC SDD program review quarterly and submit results to senior leadership. Serve as HQ USACE interface to USGBC, GBCI, and other service SDD points of contact. Represent HQ USACE on tri-service committees including the Interagency Sustainability Working Group (ISWG).
- 5.2. MSC SDD POCs. Establish communication channels with District SDD POCs to communicate Army and HQ USACE SDD policies, guidance, and training opportunities to the districts and to provide consolidated MSC and district input to HQ USACE. Establish any MSC SDD specific policy and guidance. Answer District SDD POC questions on policy and technical questions or direct District SDD POCs to centers of expertise. Provide HQ USACE with list of MSC and District SDD POCs quarterly. Provide HQ USACE with list of projects LEED certified quarterly. Review MSC program (or cause a review program to be put in place) to ensure program is complying with applicable sustainability and energy policies. Report results (numbers of projects certified and “certifiable” with reasons for not obtaining certification/“certifiable” status, and any general issues) quarterly to HQ USACE. Provide training to MSC and district personnel as required.
- 5.3. DISTRICT SDD POCs. Establish communication channels within the district design and construction personnel to communicate Army and HQ USACE SDD policies, guidance, and training opportunities and to provide consolidated district input to MSC SDD POCs. Answer district personnel questions on policy and technical questions or direct personnel to centers of expertise. Provide MSC SDD POC with list of LEED Accredited District POCs quarterly, including specialty. Provide MSC SDD POC with list of projects LEED certified quarterly. Review district program to ensure program is complying with applicable sustainability and energy policies. Report results (number of projects certified and “certifiable” with reasons for not obtaining certification/“certifiable” status, and any general issues) quarterly to MSC SDD POC.

## 6. Using the LEED BD+C Rating Tool.

- 6.1. **SCORING PROJECTS WITH LEED.** The LEED BD+C rating system is for a building and its site. Some credits are claimed by the site development and some are claimed by the building. Others may be achieved by means of Army or Installation policies. Where a building is indicated as required to achieve LEED Silver in paragraph 4, it is assumed that the building and its site achieve that level together.
- 6.2. **INTEGRATED DESIGN.** An integrated design approach has proven to be critical in the pursuit and execution of LEED certified designs. An integrated design approach will be used on LEED projects and the PDT composition will reflect this approach. For a description of integrated design, see UFC 1-200-2, paragraph 2-2.1. Also please note that LEED v4 incentivizes an integrated design approach by providing a new “Integrative Process” credit. It is highly recommended (but not currently required) that the PDT review and consider implementing the requirements of this credit in their projects. Please note that the decision whether to pursue the LEED v4 credit does not remove the initial requirement to use an integrated design approach on projects.
- 6.3. **LEED ACCREDITED PROFESSIONAL.** Each design team and each construction team will include a LEED Accredited Professional (LEED AP, with appropriate specialty) as well as a geographic district LEED AP to review project documents and provide advice. The LEED AP (also with appropriate specialty) on the design and construction team will ensure correct interpretation of LEED requirements by the team, provide guidance and assistance to PDT members in developing suitable and complete documentation, ensure LEED requirements are incorporated in the work, and ensure LEED documentation prepared by the team is complete and correct. See “Appendix E – Frequently Asked Questions (FAQs)” for information on becoming a LEED AP.
- 6.4. **LEED INTERPRETATIONS AND ADDENDA DATABASE (formerly Credit Interpretation Requests or CIRs).** Registered project team members may submit inquiries to GBCI (contact GBCI for fees associated with this service) if they have a question about application of a credit to their project. Prior to submitting an inquiry project teams are strongly encouraged to review the LEED documentation, resources and credit interpretations found in the LEED Credit Library found on the USGBC website at <http://www.usgbc.org/credits>. Please note that some portions of the LEED Credit Library may require an additional fee for access, but basic credit information and interpretations are freely available. USGBC provides this database to track precedent-setting rulings on formal inquiries that can be applied to multiple projects. When using a ruling or credit interpretation, ensure that the ruling applies to the version of LEED that is being implemented on the project.
- 6.5. **LEED INNOVATION (ID) AND PILOT CREDITS.** LEED recognizes that emerging trends, technologies and practices may be worthy of LEED credits. In addition, ID credits may be awarded for pursuing pilot credits identified by USGBC

or exhibiting exemplary performance on existing credits as identified in the LEED v4 Reference Guide. Pilot Credit documentation may be found on the USGBC website at <http://www.usgbc.org/leed/tools/pilot-credits>. LEED ID credits are can be found in various places including the LEED Reference Guide, on (included in LEED Reference Guide, USGBC ID Credits Catalog, or approved by CIR). Please note that the total number of ID Credits that may be pursued on a given project is limited to 5.

- 6.6. **LEED REGIONAL PRIORITY CREDITS.** Regional Priority Credits (RPC) are identified by USGBC to provide an incentive for the achievement of credits that address geographically specific environmental, social equity, and public health priorities. Projects may earn between four and six RPCs by pursuing the credits identified for the projects' specific location. The process that USGBC uses for identifying LEED v4 is Geographic Information Systems (GIS) based and has the potential to change over time. Registered projects may now view the RCPs eligible for their project on LEED Online. USGBC is working on a database of RCPs for public use, which will be available at <http://www.usgbc.org/rpc>. Please note that RCPs are not new or special credits, they simply represent a point-incentive to pursue "high value" credits identified for the project location. Achievement of these credits does not require additional documentation; it simply requires meeting the performance threshold identified for the RPC. If achieved, the project will receive one additional "bonus point" for the RPC threshold achieved.
- 6.7. **LEED PROJECT BOUNDARY.** For purposes of applying the LEED credit calculations a LEED Project Boundary is established by the design team and all LEED documentation consistently observes this boundary. The LEED Project Boundary may match the limits of construction, but may also deviate from that perimeter. The LEED Project Boundary should exclude work that is unrelated to the building seeking LEED certification. An example of work that is logically located outside the LEED Project Boundary for a building is road improvements or utilities that extend well beyond the building site. Work that is outside the LEED Project Boundary is excluded from all LEED documentation. See the USGBC website at <http://www.usgbc.org/credits> for LEED Minimum Program Requirements and other supplemental documentation for determining LEED Project Boundaries.
- 6.8. **CAMPUS PROJECTS (MULTIPLE BUILDINGS ON A SHARED SITE).** When a project includes a single "master" site with more than one building, it may make sense to register the project as a LEED Campus. Under a LEED Campus project, each building will include the credits claimed by the "master" site in its LEED score followed by all building credits applicable to that building. Campus registration offers the potential for reduced site documentation and possible flexibility for site credit compliance, but also carries some constraints associated with phasing and coordination of the site amongst different projects and possibly different contracts. Prior to pursuing campus certification, it is recommended that the PDT researches feasibility of campus registration in relation to the specific constraints associated with their project(s). PDTs may also want to consider LEED for Neighborhood Development where projects involve large-scale land development or redevelopment.

See the USGBC website for more information.

6.8.1. LEED APPLICATION GUIDE FOR MULTIPLE BUILDINGS AND ON-CAMPUS BUILDING PROJECTS. The process for pursuing LEED Campus certification has changed dramatically over the years, and it has become more formal and defined with each new version of LEED released. The LEED Application Guide for Multiple Buildings and On-Campus Building Projects (AGMBC) was the first document produced to address Campus Certification, but it was only applicable to LEED v2.x registered projects. The most recent version of guidance is simply titled “Campus Guidance,” published 1 Apr 2014 on the USGBC website at <http://www.usgbc.org/resources/campus-guidance>. Both documents discuss the opportunities and challenges associated with Campus Certification. They also provide alternative compliance paths that are uniquely suited to the military installation environment, such as how to treat shared features such as consolidated parking.

6.8.2. CAMPUS PROJECTS COORDINATION AND DOCUMENTATION. See USGBC’s “Campus Guidance” document for special coordination and documentation requirements for Campus projects. If further information is needed, it is highly recommended to contact USGBC directly to discuss specific project details and how they relate to the possibility of Campus Certification. The most appropriate way to make that contact would be through the USGBC website at <http://www.usgbc.org/help-topic/campus>, which contains FAQs as well as telephone, mail, and email contact information.

6.9. CENTRAL ENERGY PLANTS. Follow current USGBC guidance. Currently there is no document tailored to LEED v4 for addressing Central Energy Plants. That said, USGBC document “Treatment of District or Campus Thermal Energy in LEED v2.x and LEED 2009 – Design & Construction” dated August 13, 2010, may contain very valuable information regarding approach, documentation and implementation of those systems on and in relation to projects seeking LEED certification.

## **7. Relation of LEED to Federal and Army SDD Mandates.**

- 7.1. **GENERAL.** Although they are similar to LEED, Federal, DoD, Army, and USACE sustainable design mandates are separate standalone requirements. Meeting the LEED requirements identified herein does not in itself constitute compliance with Federal, DoD, Army, and USACE sustainable design mandates. PDTs will first address compliance with these separate standalone requirements and then select LEED credits that contribute to compliance when possible. Implementation guidance for USACE, DoD, Army and federal sustainable design mandates is outside the scope of this Guide. [Check with the AF for any AF criteria or guidance not included in DoD and federal sustainable design mandates].
- 7.2. **FEDERAL ENERGY CONSERVATION MANDATE COMPLIANCE AND LEED OPTIMIZE ENERGY POINTS CALCULATIONS.** High Performance and Sustainable Building UFC 1-200-02 will serve as the primary reference document for identifying energy conservation criteria and requirements. That said, the federal government, DoD, Army and USACE, and LEED are constantly changing the energy metrics by which they measure energy performance and savings. Baselines, included loads (process loads, plug loads, etc.), factoring of energy cost, and other factors vary depending up on the criteria, policy, or standard referenced. The PDT and its supporting stakeholders will keep informed of all new mandates, policies, and directives applicable to their projects and pursue the most stringent criteria applicable. This may mean that multiple energy models and multiple sets of documentation may need to be maintained to ensure compliance.
- 7.3. **ARMY WASTE DIVERSION MANDATE COMPLIANCE AND LEED CONSTRUCTION WASTE MANAGEMENT CREDIT CALCULATIONS.** Army waste diversion calculations include all waste in the project (including work outside of the LEED Project Boundary or potential Master Site Boundary). LEED v4 now evaluates waste diversion based on identified “waste streams.” Reduction may only be required in a given number of streams for credit compliance. LEED v4 also recognizes efforts for reduction of waste in lieu of diversion. The PDT should consider the differences between Federal, DoD, Army, and USACE sustainable design mandates and compliance with LEED Construction and Demolition Waste Credits being pursued. Calculations and documentation may have to be completed separately in order to substantiate compliance with all applicable criteria.

## 8. LEED Certification.

8.1. GENERAL. LEED certification is accomplished by means of GBCI review of all project LEED documentation and subsequent certification of the project score by GBCI. See both the GBCI website at <http://www.gbci.org> as well as the USGBC website at <http://www.usgbc.org/certification#certify> for project certification information, procedures and fees. District personnel may submit projects for certification or contracts may include a requirement for the Contractor to obtain LEED certification. Throughout the certification process the Designer of Record and Contractor may be requested to answer questions from the GBCI review team and must remain available to support the certification process to achieve certification.

### 8.2. REQUIRED LEED CERTIFICATIONS.

8.2.1. FY12 AND EARLIER. These projects will most likely NOT be registered or certified under LEED v4. See previously-published versions of the LEED Implementation Guide for guidance on those projects. If a prior year project does need to pursue LEED v4 guidance, contact the HQ USACE SDD POC for additional guidance. [The AF requires certification for all projects per AF/A7C memo AF SDD Updated Guidance].

8.2.2. FY13 AND BEYOND. Starting with the FY13 program formal LEED certification is required as indicated in paragraph 4. All associated fees for project registration and certification must be paid from project funds. Version of LEED used will depend upon the versions available at the time of project registration.

8.3. DESIGN REVIEW. The GBCI certification process allows two options – a single certification review of all design and construction credits at the completion of construction OR a review of design credits at the completion of design (GBCI design review) followed by a review of construction credits at the completion of construction. Each GBCI design review can take approximately three months. The benefit of the second option is a review early in the project.

8.3.1. Design-Bid Build (DBB) projects seeking certification should strongly consider a design review on the credits for which they are responsible. This provides more opportunity for corrections as well as creating a stronger contractual break between designer-completed credits and contractor-completed credits. PDTs should strive to complete all relevant project documentation prior to project advertisement, but many design credits require submittals and other construction documentation that makes it less practical to pursue Design Review prior to contractor involvement. Regardless of the path taken, PDTs should instigate the Design Review only when the preponderance of the design credits are complete and ready for GBCI review. If it is expected that the contractor pay for a design review, it must be identified in the design specifications. Otherwise, since the review is optional for certification, it would be optional for the contractor to pay for said review. Also note that if design

documentation continues into the construction phase of the project, close coordination with the contractor is required to ensure design credits are available for submission without impacting the contractor's scheduled completion metrics.

8.3.2. Design-Build (DB) projects (DB Contractor is Designer of Record) seeking certification are not required to obtain GBCI design review but it is recommended. If the USACE PDT wishes to contractually require a Design Review by the DB Designer of Record, that requirement will need to be identified in the RFP.

- 8.4. CERTIFICATION AND PROJECT CLOSEOUT. LEED Certification is applied for when construction is substantially complete and all credit documentation has been prepared by the responsible parties. This task should have no effect on BOD. Financial closeout of contracts that require certification cannot occur until certification ruling is obtained. GBCI does not require that post-occupancy credit activities be complete at the time of certification request, but it is advised that those items are on track to completion prior to project financial closeout.
- 8.5. CERTIFYING CAMPUS PROJECTS. See "Campus Guidance," published 1 Apr 2014 on the USGBC website at <http://www.usgbc.org/resources/campus-guidance> for more information.
- 8.6. CERTIFICATION FEES. Fees for project certification may be paid from project design or construction funds. If it is the PDT's desire to have the construction contractor pay certification fees, those requirements need to be added into the project specifications. See the USGBC website at <http://www.usgbc.org/cert-guide/fees#bdc> for project certification procedures and fees. Note that LEED v4 Campus projects have a different fee structure.
- 8.7. OWNER AND CHANGE OF OWNER AT CERTIFICATION. The US Army is the owner [for the AF, the US Air Force is the owner]. The USACE geographic district PM (or delegated authority) will act as Owner's representative through project design, construction, and certification and will be identified as the project Owner on LEED Online. **Immediately prior to acceptance of GBCI certification ruling the Owner's representative designation in LEED Online must be changed to the Installation DPW Director (or delegated authority) [For the AF, the owner's representative will be changed to the Base Civil Engineer (or delegated authority). For other agencies, check with that agency's organizational representative].** The USACE geographic district PM is responsible for ensuring this change in Owner designation occurs at the correct time.



## 9. Project Registration.

- 9.1. GENERAL. Registration and compilation of LEED project data at LEED Online (currently listed as <https://www.usgbc.org/leedonline>) is required for all projects except those that do not meet the Minimum Program Requirements. LEED project registration allows the PDT access to use the LEED v4 forms (preformatted credit documentation forms with built-in calculators) for project documentation and space to compile all LEED project data on LEED Online. Please note that LEED registration is the only legal means to access the copyright-protected LEED forms from LEED Online. **Downloaded LEED forms may not be locally duplicated for use on unregistered projects. Sample LEED forms are available for download on the USGBC website at [www.usgbc.org/credits](http://www.usgbc.org/credits).**
- 9.2. LEED VERSION 2.2 & 2009 PROJECT REGISTRATION. This document is only intended to address LEED registration under LEED v4. Projects seeking registration under past versions of LEED should seek the most appropriate version of the LEED Implementation Guide for the version of registration being pursued. As of June 2009, projects may no longer be registered under LEED v2.2. The use of a single registration for Campus projects is allowable only for v2.2 projects and requires all buildings under the single registration to earn exactly the same credits. The deadline for registration of LEED v2009 projects is currently set at May 2015, but check the USGBC website at [www.usgbc.org](http://www.usgbc.org) for more current and detailed information.
- 9.3. LEED v4 PROJECT REGISTRATION. All buildings that meet the minimum program requirements and applicable Federal, DoD, Army and USACE directives will be registered. Use the LEED Forms for project documentation and compile all project documentation on the LEED Online. The current web address for LEED Online v4 is <https://www.usgbc.org/leedonline>.
- 9.3.1. NUMBER OF REGISTRATIONS. LEED v4 requires a separate registration for each building.
- 9.3.2. CAMPUS PROJECTS. See “Campus Guidance,” published 1 Apr 2014 on the USGBC website at <http://www.usgbc.org/resources/campus-guidance> for more information. It is strongly recommended to contact USGBC directly to discuss specific project details and how they relate to the possibility of Campus Registration and Certification. The most appropriate way to make that contact would be through the USGBC website at <http://www.usgbc.org/help-topic/campus>, which contains Frequently-Asked-Questions (FAQs) as well as telephone, mail, and email contact information.
- 9.3.3. MINIMUM PROGRAM REQUIREMENTS. LEED v4 requires compliance with LEED Minimum Program Requirements (MPRs) to register any building. Do not register any building that cannot meet all MPRs by design completion. For more information, see the USGBC website at <http://www.usgbc.org/credits/new-construction/v4/minimum-program-requirements>.

- 9.4. **METHOD OF PROVIDING POST-OCCUPANCY UTILITY DATA.** Registration in LEED Online requires selection of the method the Owner will use for providing utility data. All DoD entities are exempt from this requirement. See Appendix H – Waivers, which contains a formal agreement from USGBC, exempting DoD facilities from energy and water meter data sharing requirements as well as instructions for documenting this on individual projects.
- 9.5. **REGISTRATION FEES.** Fees for project registration may be paid from project funds. See the USGBC website at <http://www.usgbc.org/cert-guide/fees#bdc> for project registration procedures and fees. See “Appendix G – LEED Registration” for registration instructions.
- 9.6. **REGISTERED PROJECT ADMINISTRATION.** The individual who registers a project is the online project administrator. This individual controls access and saves/modifies data privileges in the online project. Only one project administrator is allowed per registered project, but project administrator designation may be transferred from one person to another during the course of a project via LEED Online. The project administrator may assign any team member(s) as Project Team Manager. Project Team Managers have the same rights to manage the online project as the Project Administrator. Qualified PDT personnel are encouraged to manage online administration during the design phase and the construction phase as appropriate. Contracts may include a requirement for the Contractor to manage online administration during construction, or a combination of administration transfer(s) may be necessary based on project requirements and PDT/District staffing and preference.
- 9.6.1. **WHO REGISTERS A PROJECT?** It is strongly encouraged that District personnel register the project to better facilitate government access to project documentation. That said, contracts may be written include a requirement for the Contractor to register the project.
- 9.6.2. **WHEN TO REGISTER A PROJECT.** Project registration occurs at the beginning of design (preparation of drawings and specifications). Projects should be registered before design commences so that the templates are available to the design team from the start of design. Districts may register projects at Code 3 in conjunction with parametric estimate preparation. The advantage of doing so is that it guarantees the project may be executed under the version of LEED for which it was budgeted (not subject to un-programmed requirements due to release of a new version of LEED). The disadvantage is that the project administrator role must be reassigned in the event of staff changes and project assignment changes prior to commencement of design or Request for Proposal (RFP) preparation.
- 9.7. **HOW TO REGISTER A PROJECT.** See “Appendix G – LEED Registration” for instructions and naming conventions for registering Army projects.

## 10. Project Documentation.

- 10.1. GENERAL. All projects will incorporate the applicable LEED prerequisites and credits in the construction drawings and specifications and will provide LEED supporting documentation in the design analysis and the construction phase submittals in accordance with the applicable LEED Reference Guide both in electronic archive copy and on LEED Online. LEED supporting documentation will be separable from other project documentation and included in the project files. Project LEED Design and construction credit documentation will be prepared so that it can be compiled into a single document. LEED Design credit documentation will be prepared and reviewed during design and furnished to construction contractor (usually through LEED Online) to add construction credit documentation. At closeout, all project LEED documentation (design and construction) is submitted as an as-built closeout submittal. All documentation in all phases will be kept up-to-date at least monthly and available for review as a single (compiled) document at any time by government personnel (at no additional cost).
- 10.2. LEED ONLINE. All buildings and projects that seek certification are to be registered on LEED Online. The current web address for LEED Online v4 is <https://www.usgbc.org/leedonline>. Compile all LEED supporting documentation at LEED Online as well as in electronic archive copy and use standard LEED-supplied forms whenever possible. LEED Online is the best and most-efficient means for storing and sharing LEED Documentation amongst shareholders. That said, the project team members should archive all uploaded documentation in the project directory for record and reference purposes.
- 10.3. LEED DOCUMENTATION. The process for documenting a project in preparation for certification has changed significantly over the last several revisions of LEED. USGBC has made great strides in clarifying documentation requirements while also reducing the amount of required documentation on many credits. Supplemented with the appropriate LEED forms and supporting documents, most project documentation can be compiled in LEED Online by using the resources available through USGBC and LEED Online. Credit forms, calculators, and other tools are much more integrated and powerful than they were in previous versions and, which makes compiling the required project documents more streamlined. LEED forms contain all the documentation requirements and often calculators to aid in project compliance computations. LEED documentation for all Army projects shall include the following at minimum:

*10.3.1. LEED v4 Scorecard* - The LEED v4 Scorecard is the most efficient tool for tracking project certification status on a holistic basis. The most current version of the scorecard can be found on the USGBC website at <http://www.usgbc.org/dopdf.php?q=scorecard/new-construction/>, but many PDTs utilize a spreadsheet form of the scorecard for easier editing. An example scorecard has been included in “Appendix C – Sample LEED v4 Scorecard.” It is important that the PDT maintains a LEED Scorecard from project design kickoff all of the way

through construction completion. The scorecard should track targeted, prospective, and abandoned credits for the project as well as identifying responsible parties, credit documentation, and review status.

*10.3.2. LEED v4 Forms* - The primary means of individual credit documentation is through the published LEED v4 Forms. Credit forms are downloaded from the project directory on LEED Online. For every credit being pursued, the associated form shall be completed and uploaded to LEED Online. Each form has very clear instructions for required content, calculations and supporting documentation. All of that information should be warehoused in LEED Online, but also archived in the project directory for record and reference purposes. Sample forms can be found on the USGBC website at <http://www.usgbc.org/sampleforms>.

*10.3.3. LEED Documentation Binder* - All LEED documentation including all applicable registration information, scorecards, credit forms, supporting documentation, etc. shall be compiled over the duration of the project. This binder shall be organized in a logical and easy-to-navigate manner and may be in hardcopy or electronic form. This binder shall be readily accessible for use by the government in audit and validation activities.

- 10.4. **AUDIT DOCUMENTATION.** Government Validation of projects may involve audit of any or all credits claimed including request for additional information at USACE reviewer discretion. The Designer of Record and Construction Contractor will compile all backup supporting data for all LEED credits claimed but are not required to submit additional information unless requested. See Par. 11 for more information regarding Government Validation procedures.
- 10.5. **LEED SILVER EXEMPT BUILDINGS.** If Silver-exempt buildings fall within the LEED Project or Campus Boundary, project LEED documentation includes the contribution of these buildings for all Sustainable Sites and Location and Transportation credits that are attempted. The contributions of exempt buildings are EXCLUDED from LEED documentation for all other credits, including, for example, waste diversion, recycled content, and energy credits.
- 10.6. **GOVERNMENT SUBMITTALS AND LEED CERTIFICATION SUBMITTALS.** Completion of LEED credit forms does not necessarily substantiate full compliance with all Federal, DoD, Army, and USACE directives. In cases where the content of a LEED certification submittal to GBCI differs from what is required by the Government, the PDT shall maintain documentation as part of the LEED Binder that indicates compliance with all requirements. For example, in cases where a signed declaration of compliance by a licensed professional engineer is acceptable documentation for GBCI but Government requires supporting documentation, submit to each entity what they require.

## 11. Government Validation.

- 11.1. **GOVERNMENT VALIDATION.** All projects produce LEED documentation as part of project development and execution, using project funds. The supporting Engineer District, as Authorized Design and Construction Agent, is responsible for reviewing the project documentation and validating that all credits are correctly interpreted and documented in accordance with the LEED standard, from design through construction closeout. This is required on all projects, including those that will be formally LEED certified by GBCI. The Army expects USACE to review and validate LEED compliance as part of Design and Construction Agent activities. The PM is responsible at all project phases for ensuring that Government Validation by qualified individuals (LEED AP as well as appropriate engineering disciplines) occurs. Validation of design credits is part of design independent technical review/conformance review. Validation of construction credits is part of construction Supervision and Administration (S&A) activities.
- 11.2. **COORDINATION AND ENDORSEMENT.** The PM, informed by the design team lead, is also responsible for coordinating with the Installation DPW or the Reserve Component [or AF equivalent], the USACE designated Center of Standardization (COS), if applicable, the designer and the constructor to obtain consensus on the project score and rating. The USACE District, as Design and Construction Agent, is ultimately responsible for ensuring correct interpretation and scoring in accordance with the LEED requirements.
- 11.3. **GOVERNMENT VALIDATION AND LEED CERTIFICATION.** LEED certification is not a substitute for Government Validation, which is part of contract administration and is required on all projects. Government review of LEED documentation in no way supersedes or modifies the requirements and rulings of GBCI for purposes of compliance with project requirement to obtain LEED certification.
- 11.4. **HQUSACE VALIDATION PROGRAM.** HQUSACE may conduct reviews to validate project scores and to assess the effective implementation of LEED for Army [or AF] construction projects. A validation team composed of USACE members will conduct these project reviews with invited ACSIM and Installation Management Command (IMCOM) participation. Most often, these reviews will be conducted by evaluating the appropriate Sustainability Record Card. Additional documentation for these reviews shall be available and provided upon request at no additional cost to the Government.

## 12. Reporting.

12.1. PROJECT MANAGER RESPONSIBILITY. The PM is responsible in all project phases for ensuring that a PDT consensus LEED score is established, and for recording and reporting the results.

12.2. PRESCRIBED REPORTING POINTS AND DOCUMENTATION. At each prescribed reporting point indicated below, the USACE district-validated LEED Project Checklist which indicates the LEED credits the project will/has earned, will be coordinated with and endorsed in writing by the Installation DPW or the Reserve Component [or AF equivalent], the USACE designated COS if applicable, the designer and the constructor as applicable. Endorsement will be indicated by each party initialing or signing and dating the LEED Project Checklist. The endorsed LEED Project Checklist (initialed or signed and dated by all applicable parties) will be placed in the project file by the PM or design team lead.

### 12.2.1. DBB PROJECT PRESCRIBED REPORTING POINTS.

12.2.1.1. Planning Charrette to set target SDD performance goals and address budget impacts.

12.2.1.2. Parametric Submittal/Code 3 Design to revise target credits and score.

12.2.1.3. Final Design to establish a final design score.

12.2.1.4. Beneficial Occupancy/Construction Closeout to establish a final project score.

### 12.2.2. DB PROJECT PRESCRIBED REPORTING POINTS.

12.2.2.1. Planning Charrette to set target SDD performance goals and address budget impacts.

12.2.2.2. Parametric Submittal/Code 3 Design/Final RFP to revise target credits and score.

12.2.2.3. Conformed Proposal. After negotiations are complete at award.

12.2.2.4. Beneficial Occupancy/Construction Closeout to establish a final project score.

## 12.3. P2 REPORTING.

### 12.3.1. GENERAL.

12.3.1.1. P2 REPORTING FOR EXEMPT PROJECTS. For projects that are

exempt from the minimum score requirements, indicate “N/A”. Indicate in the “Comments” section which rating tool is used, project rating and why project is exempt from the minimum score requirement (example: horizontal construction).

12.3.1.2. P2 REPORTING FOR PROJECTS WITH MULTIPLE BUILDINGS. For projects with multiple buildings, indicate the rating of the lowest-achieving non-exempt building in the project.

12.3.2. LEED RATING INPUT. Once the project is established in P2, the rating tool and the current rating will be reported in P2 under “LEED Rating.” Under “LEED Comments” include any additional comments concerning the achievement of credits the PM deems relevant.

12.3.2.1. CURRENT RATING. All projects have a current rating that is established at the initial programming charrette and is finalized at project completion. Throughout the course of the project the PM will report the current rating in under “LEED Rating.”

12.3.2.2. “PENDING” RATING. A “pending” rating will be reported in P2 under “LEED Rating” only until the initial charrette, when the current rating is established. If project is submitting a waiver request, change the P2 rating to “pending” at the time the waiver letter is submitted and under “LEED Comments” indicate that a waiver has been requested and indicate the date the waiver request was submitted.

12.3.2.3. “LEED AT AWARD” INPUT. Prior to award, indicate “pending” in this data field. Upon award indicate the current rating.

12.3.2.4. “LEED AT BENEFICIAL OCCUPANCY DATE (BOD)” INPUT. Prior to BOD, indicate “pending” in this data field. Upon BOD indicate the final GBCI certification rating determined at the Beneficial Occupancy/Construction Closeout Prescribed Reporting Point. For projects not fully certified at BOD because of ongoing construction, the expected achievement based on review at BOD will be used. NOTE: Resident Management System (RMS) does not currently populate P2 for this data field. PM must enter this data manually.

12.3.2.5. PROJECTS REQUIRING LEED WAIVER. Under “LEED Comments” state that project requires a waiver for LEED requirements, indicate the date waiver request was submitted to HQUSACE and date waiver was received. Project shall not be reported as “Ready to Advertise” in P2 until waiver request has been submitted to HQUSACE.

### **13. Initial Project Programming/Planning Charrette.**

- 13.1. **LEED TRAINING.** The planning charrette team will ensure that all PDT members (including Users and Installation staff) have a basic understanding of LEED and provide LEED overview training prior to or as part of the charrette for those that do not. The district SDD POC may be a good point of contact for this training.
- 13.2. **LEED PROJECT STRATEGY AND SCORECARD.** Establish the project sustainability goals and use LEED as part of the strategy for meeting them. Use Army and federal sustainable design mandates as a basis for the project sustainability goals and choose LEED credits that contribute to the goals. Ensure that the first costs associated with the selected LEED credits are captured in the DD Form 1391. The quality of this effort greatly influences the project's success in achieving SDD goals. Include a completed LEED Project Scorecard in the charrette report.
- 13.3. **PROGRAMMING SDD COSTS.** Prior to FY17, projects may be programmed using LEED v4 if project scope and funds allow for it, but the FY17 program (and beyond) shall be programmed using LEED v4. Under the primary facilities cost, a separate line item will be added labeled "SDD & Energy Protection Act of 2005 (EPA05)" (under DD Form 1391 category code (00005). This cost line item will include the "additional costs," defined as the added cost to raise a facility's LEED rating from v4 Certified to v4 Silver. For programming purposes assume that the PAX unit cost includes the cost of v2009 Silver level building and that v2009 Silver level building is equivalent to v4 Certified level building. If the additional costs are undetermined at the time the DD Form 1391 is developed, they will be programmed at 2 percent of the primary facility cost (facilities with climate control systems only) until they are determined. When the costs exceed 2 percent, an explanation will be provided in the description of the proposed construction under block 10 of the DD Form 1391 describing the SDD features included in the building design. For DD Forms 1391 with multiple primary facilities, the SDD & EPA05 primary line item will include sub-line items for each climate controlled facilities SDD & EPA05 costs. Site related SDD features will be programmed as line items under Supporting Facilities.
- 13.4. **FAILURE TO MEET REQUIREMENTS.** The charrette report will include either a statement that confirms that the project can meet all LEED requirements as programmed or identifying all LEED requirements the project cannot meet and the reasons why. In the latter case, the PDT will submit a waiver request per the procedures in "Appendix H – Waivers" concurrent with the charrette report submittal and include a copy of the waiver request in the charrette report.
- 13.5. **PRESCRIBED REPORTING POINT.** The PM will coordinate formal approval and filing of the endorsed LEED Project Scorecard at each Prescribed Reporting Point. The LEED Project Checklist representing the project strategy resulting from the planning charrette will be endorsed by the Installation DPW or the Reserve Component equivalent [or the AF BCE], the COS (if applicable) and the supporting Engineer District or Authorized Design and Construction Agent per paragraph 11.2 and included in the project files.



#### **14. Code 3 Design/Parametric Estimating Using ENG Form 3086.**

- 14.1. **CODE 3.** The Code 3 design provides project definition services and the ENG Form 3086 parametric estimate, which is used as a basis to validate and update the DD Form 1391 prior to submission to Congress. See Unified Facilities Criteria (UFC) 3-710-01A “Code 3 Design with Parametric Estimating” for a detailed explanation of Code 3 activities.
- 14.2. **LEED PROJECT SCORECARD.** At the project definition charrette, use LEED to refine and/or validate the target sustainability credit goals for the project as identified in the planning charrette and provide a LEED Project Scorecard, updated as needed.
- 14.3. **VALIDATING SDD COSTS.** Re-validate and update, if necessary, the cost data created during the Initial Project Programming/Planning Charrette. Projects may claim additional costs (up to 2% of the primary facilities cost) for meeting a Silver Rating within the Budget Cost Estimates/Parametric Estimates submittal (ENG Form 3086). If the PDT determines they must exceed 2% of the primary facilities cost, detailed justification, including Life Cycle Cost Analysis (LCCA) in compliance with all applicable DoD, Army and USACE criteria must be submitted with the ENG Form 3086 for approval.
- 14.4. **FAILURE TO MEET REQUIREMENTS.** The project definition report will include either a statement that confirms that the project can meet all LEED requirements as programmed or identifying all LEED requirements the project cannot meet and the reasons why. In the latter case, the PDT will submit a waiver request per the procedures in “Appendix H – Waivers” concurrent with the project definition report submittal and include a copy of the waiver request in the project definition report.
- 14.5. **PRESCRIBED REPORTING POINT.** The PM will coordinate formal approval and filing of the endorsed LEED Project Scorecard at each Prescribed Reporting Point. The updated LEED Project Scorecard will be endorsed by the Installation DPW or the Reserve Component equivalent [or the AF BCE], the COS (if applicable) and the supporting Engineer District or Authorized Design and Construction Agent per paragraph 11.2 and included in the project files.

## 15. Design-Build (DB) Request for Proposal.

15.1. GENERAL. Generally, the minimum score requirement is indicated and offerors are given maximum latitude to develop the overall credit strategy based on project opportunities and offeror's experience and strengths. Individual credits which are required, preferred and prohibited may be identified as needed based on project-specific coordination, but should not be overly restrictive. Federal SDD mandates are stated separately as standalone requirements. The RFP conveys the status of credits that fall outside design scope (such as site selection credits) and includes coordination information relative to certain credits (such as availability of Installation recycling facilities and noting of related federal SDD mandates). See "Appendix B – RFP Sample Text (Design/Build, Single Contractor)" for additional requirements, guidance and sample language for RFPs. Include the following information in the RFP:

*15.1.1.* Identify the minimum LEED certification level. Identify any buildings in the project that are exempt from the minimum LEED certification level requirement.

*15.1.2.* Indicate the status of credits that are claimed based on the site selection ("Location and Transportation" and "Sustainable Sites" Credit Categories), including High-Priority Site, Surrounding Density and Diverse Uses, Access to Quality Transit, Site Assessment, Site Development, Open Space, Rainwater Management credits, etc. Indicate whether the project may claim the Green Power or Carbon Offset credits.

*15.1.3.* Indicate rules for acceptability of proposed Innovation (ID) credits. Ensure that credits that are to be the contractor's responsibility are clearly identified.

*15.1.4.* If the project is already registered through LEED Online, look up and indicate the RPCs for which the project is eligible. If the project is not yet registered, indicate project location and zip code. For all projects include utility rates for Optimize Energy credit calculations.

*15.1.5.* For multiple building projects, consider allowing use of a "LEED Campus" approach to certification. The RFP should reference the document "Campus Guidance," published 1 Apr 2014, available through the USGBC website at <http://www.usgbc.org/resources/campus-guidance> for more information. Please note that averaging may be used for LEED compliance as permitted by USGBC and GBCI but averaging is not permitted for demonstrating individual building compliance with Federal, DoD, Army, and USACE energy reduction and indoor water use reduction requirements.

*15.1.6.* Include coordination information relative to credits and indication of required/preferred/prohibited credits (if any). Coordination information includes important proposer assumptions regarding Government commitments to activities required for credits and acceptable options for particular credits. LEED Project Credit Guidance is an appendix document included in the military construction

(MILCON) Transformation RFP templates. It includes default assumptions and acceptable options, comments on relationship to federal SDD mandates, and Army credit preferences. Edit this appendix to indicate any Installation credit preferences (that are more restrictive) and any project-specific revisions to assumptions. Obtain written commitment from the Installation before modifying any assumptions regarding activities performed by the Installation for any credit. Include the LEED Project Credit Guidance document as an appendix to the Statement of Work.

*15.1.7.* Include completed Owner's Project Requirements (OPR) document for LEED commissioning for each non-exempt facility. The applicable COS creates and maintains this document for Army Standard Design buildings. The RFP Preparer is responsible for creating this document for each non-standard design building in the project and for obtaining OPR document(s) from COS for standard design buildings.

*15.1.8.* Indicate who will provide any Commissioning or AE services required for individual LEED credit compliance identified in the credits (Enhanced Commissioning, Building Envelope Commissioning, etc.). Authority, services and coordination requirements as applicable.

*15.1.9.* Indicate LEED registration/certification requirements. Indicate who pays registration fees and who administers the online project. Indicate whether certification is required and, if so, indicate who pays certification fees if applicable and who coordinates certification with GBCI. If the RFP Preparer intends to require a LEED Design Review at the design phase, it must be identified in the RFP. The RFP must also identify which entity will cover those costs. Otherwise, it will be the choice of the DB contractor whether to conduct a LEED Design Review since it is not mandatory for certification.

*15.1.10.* Indicate post-award LEED submittal and documentation requirements. Include and require compliance LEED Documentation requirements identified in paragraph 10.3 above. Require monthly updates to the LEED documents.

*15.1.11.* Require the Contractor to provide a LEED AP (with the appropriate specialty) assigned to the project from contract award through closeout.

*15.1.12.* Require a Performance Capability proposal that includes the Contractor's past LEED experience, plan and internal monitoring system to meet LEED requirements and identification of key responsible personnel to include the LEED AP as applicable.

*15.1.13.* Require a Technical proposal that includes a LEED Project Scorecard reflecting proposed credits to be claimed.

*15.1.14.* Require Contracting Officer advanced approval of any post-award changes to the credits indicated in the accepted proposal. Section SPECIAL CONTRACT REQUIREMENTS should include the paragraph "Deviating from the Accepted

Design.”

- 15.2. **RFP WIZARD.** The RFP WIZARD contains standard language incorporating the approved federal SDD mandates, Army mandates and some of the items above. The RFP must be edited for project- specific conditions and for some of the items above.
- 15.3. **CONFLICTS.** If the RFP includes mandatory or preferred floor plans or drawings, it is critical that the drawings do not conflict with any individual credits that are indicated as prerequisites or mandatory. The same is true of the RFP written design requirements; the RFP must not contain requirements that preclude the ability to earn any individual required or mandatory LEED credit or that in aggregate make meeting the overall score requirement not feasible. The RFP preparer is responsible for ensuring absence of these conflicts.
- 15.4. **TECHNICAL PROPOSAL REVIEW.** During conformance review of technical proposals prior to award, ensure compliance with RFP requirements (including assumptions instructions and coordination with work by others) and resolve any conflicts between points indicated and other elements of the technical proposal. During conformance review, review all proposed Innovation credits for feasibility and conformance to acceptability requirements.
- 15.5. **PRESCRIBED REPORTING POINT.** The PM will coordinate formal approval and filing of the endorsed LEED Project Scorecard at each Prescribed Reporting Point. The LEED Project Scorecard representing the project current rating resulting from the conformed proposal will be endorsed by the Installation DPW or the Reserve Component equivalent [or AF BCE], the COS (if applicable), the DB contractor and the supporting Engineer District or Authorized Design and Construction Agent per paragraph 11.2 and included in the project files.
- 15.6. **FAILURE TO MEET REQUIREMENTS.** If the PDT determines during RFP preparation that the project cannot meet all LEED requirements and a waiver has not been previously submitted, the RFP Preparer will prepare the draft waiver request including technical justification and submit it to the PM no later than concurrent with the final RFP submittal. The PM will submit the waiver request per the procedures in “Appendix H – Waivers.” Project shall not be reported as “Ready to Advertise” in P2 until waiver request has been submitted to HQUSACE.

## 16. Design.

- 16.1. **DB POST AWARD CONFERENCE/DBB PRE-DESIGN CONFERENCE.** The Designer of Record will ensure that all team members (including Users and Installation staff) have a basic understanding of LEED v4 and provide overview training for those that do not. A conference will be held and the conference agenda will include discussion of LEED roles and responsibilities, goals and compliance requirements, coordination issues including assignment of LEED Online team memberships for district, COS and installation representatives for review purposes, discussion of possible problem areas, and review of documentation requirements. Meeting attendees will include all designers of record, all design team and construction team assigned project LEED APs, construction contractor (if applicable) and USACE Project Manager. COS (if applicable), User and Installation Representative(s) including planning and maintenance staff will be invited to attend.
- 16.2. **DESIGN DOCUMENTS.** LEED v4 credit requirements will be incorporated into drawings and specifications, including all required construction phase documentation (as defined by LEED v4 credit requirements).
- 16.3. **LEED SUPPORTING DOCUMENTATION.** Supporting documentation is a separable portion of Design Analysis provided with each required design submittal. Each design submittal will include the LEED Project Scorecard identifying all credits claimed. Final design submittal for each portion of the work will include all required design documentation (as defined in paragraph 10.3) for that portion of the work (example - all site credit design documentation with final site design). For registered projects all appropriate design documentation will be uploaded to LEED Online when final design is submitted.
- 16.4. **DESIGN REVIEWS AND CREDIT AUDITS.** The Design Agent and DPW will review and comment on the design and the LEED supporting documentation and may audit individual credits where deemed necessary. For registered projects, design review will include confirmation that documentation has been uploaded to LEED Online. Design review conferences will include discussion of and resolution of all review comments to ensure consensus on achieving credit requirements and satisfactory documentation.
- 16.5. **FINAL DESIGN SUBMITTAL.** LEED v4 will be used at final design to establish a final design interim score and rating. The Design Agent (in-house or AE contracted independent technical reviewers) will validate and the PM will coordinate consensus on the final design LEED submittal adequacy, including completeness and accuracy of supporting documentation and satisfactory resolution of all review comments. A LEED Design Review through GBCI may be conducted at this time if the project is seeking certification, however see paragraph 8.3 for more information.
- 16.6. **PRESCRIBED REPORTING POINT (DBB PROJECTS).** The PM, informed by the design team lead, will coordinate formal approval and filing of the EED Project

- Scorecard at each Prescribed Reporting Point. The LEED Project Scorecard representing the project current rating resulting from the final design will be endorsed by the Installation DPW or the Reserve Component equivalent, the COS (if applicable), the DB contractor and the supporting Engineer District or Authorized Design and Construction Agent per paragraph 11.2 and included in the project files.
- 16.7. **CERTIFICATION PROJECTS (DESIGN REVIEW).** If project will be certified by GBCI, obtain GBCI Design Review of final design documentation at final design or as appropriate for the project and credits being pursued. See paragraph 8.3 for more information.
- 16.8. **TRANSFER TO CONSTRUCTION CONTRACTOR.** A copy of the completed LEED Design phase credit documentation will be saved with the project file and the completed LEED Design phase credit documentation will be transferred to construction contractor after award so that contractor can add the construction credit documentation. For registered projects this may be done by giving Contractor access rights to LEED Online.
- 16.9. **FAILURE TO MEET REQUIREMENTS (DBB PROJECTS).** If the PDT determines during design development that the project cannot meet all LEED requirements and a waiver has not been previously submitted, the Designer of Record will prepare the draft waiver request including technical justification and submit it to the PM no later than concurrent with the final design submittal. The PM will submit the waiver request per the procedures in “Appendix H – Waivers.” Project shall not be reported as “Ready to Advertise” in P2 until waiver request has been submitted to HQUSACE.

## 17. Construction.

- 17.1. **PRECONSTRUCTION CONFERENCE.** A preconstruction conference will be held and the agenda will include discussion of roles and responsibilities, goals and compliance requirements, coordination issues including assignment of LEED Online team memberships for district and installation representatives for review purposes, discussion of possible problem areas, and review of documentation requirements. Meeting attendees will include Designer of Record, all project-assigned LEED APs, construction contractor, USACE Project Manager, USACE construction staff and Installation Representative(s) including maintenance personnel whenever possible.
- 17.2. **LEED SUPPORTING DOCUMENTATION.** The LEED Scorecard (and associated LEED Documentation Binder), which is included in all contracts, indicates all required construction phase submittals and when they are due. The majority of the construction phase supporting documentation is a separable closeout submittal. Contractor will update the documentation (including updating at LEED Online for registered projects) on at least a monthly basis and make it available for review by the PM, Construction Agent and DPW [BCE for AF projects] on the jobsite at all times during construction. Monthly review of LEED documentation by Construction Agent staff is required and progress payments will be coordinated with this review.
- 17.2.1. CREDIT AUDITS.* The USACE construction staff and Installation will review the LEED supporting documentation and may request additional audit documentation where deemed necessary.
- 17.3. **USACE CONSTRUCTION AGENT.** USACE construction administration staff will be responsible for ensuring contractor compliance with contract requirements concerning LEED. Since this is an S&A activity, use of a consultant to assist in this oversight should be funded with S&A funds.
- 17.4. **CONTRACTOR NON-COMPLIANCE.** The Government's options for non-compliance to influence Contractor's behavior include interim unsatisfactory performance evaluation, withholding of progress payments and lastly, termination for default and re-procurement.
- 17.5. **BENEFICIAL OCCUPANCY.** Prior to the Red Zone meeting for each building the LEED documentation for that building will be formally reviewed by the Project Engineer and the Installation. The Project Engineer will ensure a qualified technical review by field office staff is conducted, supplemented as needed by district or consultant assistance. The Project Engineer will also ensure that the Installation representative on the PDT has access to the LEED documentation for review, is given a reasonable review period prior to the Red Zone meeting to provide comments, and is invited to attend the Red Zone meeting. The Red Zone Meeting will include discussion of the LEED documentation review comments, requests for any additional credit audit documentation the Project Engineer determines is needed to validate the credit and identification of any corrections/missing items needed before the project

closeout LEED submittal. This meeting should also include discussion of the turnover/transfer of LEED online. Following the Red Zone meeting the Project Engineer will furnish the results of this review and the anticipated LEED achievement level for the building to the Project Manager, who will enter the anticipated achievement in P2 at the “LEED at BOD” data field. For credits that cannot be validated at BOD because of ongoing construction (such as Construction and Demolition Waste Management), the expected achievement based on review at BOD will be used.

- 17.6. **CERTIFICATION PROJECTS (FINAL REVIEW AND CERTIFICATION).** At or near BOD, all LEED Documentation should be compiled and ready for final design review by GBCI. The Designer of Record shall ensure that all Design Review comments have been addressed and are loaded by the design team to LEED Online. The contractor shall ensure that all construction credit documentation has been compiled and uploaded to LEED Online. It may be beneficial to hold a coordination meeting prior to package submittal to ensure that no “gaps” exist in documentation. The responsible party (contractor or DoR depending upon contract requirements) shall obtain Contracting Officer approval to submit the final review package to GBCI. Typical review time for initial review is 25-30 working days. Upon completion of the initial review, the design and construction team will have an opportunity to address GBCI comments submitted through LEED Online. Once comments have been addressed, the responsible party will again submit the project for GBCI review (this can take yet another 25-30 working days). This second review is final unless the team decides to appeal individual credits at additional cost to the project. See instructions on LEED Online for additional guidance related to appeal cost and procedures. Once satisfied with the GBCI review and any appeals, the responsible party must accept GBCI’s rating. Please note that this process may extend beyond BOD, but should be complete prior to full contract closeout. See paragraph 8.4 for more information.
- 17.7. **CONSTRUCTION CLOSEOUT.** At Construction Closeout the PDT (Contractor, Installation and Project Engineer as a minimum) will meet to review all LEED documentation and establish a final LEED project rating if not pursuing GBCI certification. The Project Engineer will set up the meeting (with reasonable lead time) and ensure the parties noted in paragraph 11.2 are invited to attend. At the meeting the Project Engineer will verify completeness and accuracy of supporting documentation, satisfactory resolution of all BOD review comments and coordinate Installation concurrence on the final project LEED score. If the Installation is invited but chooses not to send a representative, the Project Engineer will annotate the checklist to so indicate. The LEED Closeout submittal is an as-built and will be filed with all other project as-built.
- 17.7.1. PRESCRIBED REPORTING POINT CONSTRUCTION CLOSEOUT.* At this meeting the Project Engineer will coordinate the final rating as identified by GBCI (see paragraph 11.2) the final project rating. The Project Scorecard will be furnished to the Project Manager and included in the project LEED Closeout as-built files.



## 18. Army LEED BD+C Credit Guidance and Resources.

18.1. ENERGY AND WATER EMPHASIS. Starting with the FY13 program, all buildings with a LEED BD+C Silver achievement requirement will earn at least 40% of the points required for Silver from credits that contribute to energy and water conservation, which are defined as the following:

- Sustainable Site (SS) Rainwater Management
- SS Heat Island Reduction
- All Water Efficiency (WE) credits
- Energy and Atmosphere (EA) Enhanced Commissioning
- EA Optimize Energy Performance
- EA Advanced Energy Metering
- EA Demand Response
- EA Renewable Energy Production
- EA Green Power and Carbon Offsets
- Indoor Environmental Quality (EQ) Daylight
- Innovation (ID) and Regional Priority (RP) credits for energy or water savings

18.2. REQUIRED CREDITS. Include the following credits when applicable:

- All prerequisites for all credit categories unless specifically exempted.
- SS Site Assessment
- SS Rainwater Management
- WE Outdoor Water Use Reduction (30% Savings over Baseline Minimum)
- WE Indoor Water Use Reduction (30% Savings over Baseline Minimum)
- WE Water Metering
- EA Enhanced Commissioning (Option 1, Path 1)
- EA Optimize Energy Performance (Option 1, New Construction 12% Minimum, Major Renovation 10% Minimum)
- EA Advanced Energy Metering
- MR Construction and Demolition Waste Management
- EQ Construction IAQ management Plan
- EQ Thermal Comfort
- EQ Interior Lighting (Option 2)
- Innovation (ID) LEED Accredited Professional

18.3. **PREFERRED CREDITS.** The following credits are not required, but are recommended:

- Integrative Process (IP) credit
- Location and Transportation (LT) Sensitive Land Protection
- LT Surrounding Density and Diverse Uses
- LT Access to quality transit.
- SS Light Pollution Reduction
- Materials and Resources (MR) Building Product Disclosure and Optimization – Environmental Product Declarations
- MR Building Product Disclosure and Optimization – Sourcing of Raw Materials
- MR Building Product Disclosure and Optimization – Material Ingredients
- EQ Daylight (Option 1)

18.4. **ADDITIONAL INFORMATION AND RESOURCES.** “Appendix A – Army LEED Credit Guidance and Resources,” includes issues PDTs need to be aware of relating to individual credits and a Resources section that provides references and resources that relate to LEED.

19. **RFP Sample Text.** See “Appendix B – RFP Sample Text (Design/Build, Single Contractor)” for more information on sample RFP documents.

20. **Sample LEED v4 Scorecard.** See “Appendix C – Sample LEED v4 Scorecard” for sample scorecards and additional scorecard resources.

21. **Training.** See “Appendix D – Training” for training information.

22. **Frequently Asked Questions (FAQs).** “Appendix E – Frequently Asked Questions (FAQs)” contains responses to frequently asked questions on the implementation of LEED BD+C.

23. **Glossary.** “Appendix F – Glossary” is a listing of commonly used words and acronyms and their associated definitions.

24. **Waivers.** See “Appendix H – Waivers” for information on waiver requests.

25. **LEED Registration of Army Projects.** “Appendix G – LEED Registration” contains instructions for registering projects.

## Appendix A – Army LEED Credit Guidance and Resources

It should be noted that LEED v4 has many significant changes in comparison to previous versions of LEED. PDTs should be aware of these changes as they play to use LEED v4 on their projects. This appendix will attempt to identify some of the major changes as well as reference some of the resources that are available to PDTs seeking to employ LEED v4 on their projects.

USGBC has published several documents that are useful for individuals seeking to understand the many changes that have been made in LEED v4. The links below provide some of the most popular resources, but there may be additional resources on the USGBC website:

- Education @USGBC offers materials explaining many of the differences. One example is “Understanding LEED v4” found at <http://www.usgbc.org/node/4602133>. Another is “The New LEED v4 – An Overview of the Changes” found at <http://www.usgbc.org/education/sessions/new-leed-v4-%E2%80%93-overview-changes-4628109>.
- Each credit in the online reference guide (<http://usgbc.org/credits>) has a “Guide” tab. Within that tab, there is often a “Changes from LEED 2009” link that describes any significant changes.
- Consult the “LEED v4 User Guide” for detailed information on how to implement LEED on any project. The user guide can be found on USGBC’s resource page at <http://www.usgbc.org/resources/leed-v4-user-guide>.
- USGBC has also published a table that serves as a summary of changes between LEED v2009 and LEED v4. This document can be found on USGBC’s resource page at <http://www.usgbc.org/resources/summary-changes-leed-2009-leed-v4-bdc>.

One of the biggest changes is in the ASHRAE reference standard from ASHRAE 90.1-2007 to ASHRAE 90.1-2010. Required energy savings in reference to the new ASHRAE standard under LEED v4 signifies the largest required increase in performance since LEED was created. PDTs should strongly consider this when gauging LEED v4 against their projects.

It is strongly encouraged that PDTs begin digesting these changes as early as possible. One of the easiest ways to do this is to pursue LEED v4 credits on LEED v2009 projects. PDTs can substitute individual LEED v4 credits on their current v2009 projects. This allows teams to pick credits for implementation and ease their way into some of the changes. See the following links for more information:

- <http://www.usgbc.org/resources/2009-v4-credit-substitution-bdc>
- <http://www.usgbc.org/articles/use-v4-credits-your-v2009-project>

Also note that DoD has received waivers to two items identified in LEED v4. One waiver is for exemption from utility metering requirements as identified in the LEED v4 energy and water metering prerequisites. The other waiver allows for up to an 80/20 male/female ratio for purposes of calculating water savings. Both waivers are listed below:



## LEEDv4 Process for Department of Defense Projects

Effective April 11, 2014, the U.S. Green Building Council provided a letter to the Department of Defense (DoD) to confirm that USGBC accepts the internal DoD process for tracking and reporting of energy and water data as meeting the data-sharing component of the LEED v4 prerequisites for building level energy and water metering and will not require that DoD projects share this data with USGBC.

This memo further outlines a process for DoD projects registered under LEED v4 to document in LEED Online that they comply with the metering component of both the WE prerequisite for building level water metering and the EA prerequisite for building level energy metering. This process is applicable for all DoD projects and for those projects that DoD contractors complete for DoD use. And this process is retro-active for projects registered and certified under LEEDv4 prior to April 11, 2014.

For each prerequisite complete the form in LEED Online according to the following directions:

For the **Water Efficiency Prerequisite, Building-Level Water Metering** in LEED Online:

- Select your rating system.
- Select the unit of measure used.
- **Do** comply with and check the box next to “The project has permanent water meters that measure the total potable water use for the building and associated grounds.”
- **Do NOT** “Upload: Letter of commitment” to share water usage data.
- In the section that prompts select one of the following: Third-party data source or USGBC-approved data template, **leave both blank**.
- Fill in the brackets below with the appropriate information for the project claiming exemption (do NOT use acronyms or shorthand). Then copy and paste the completed exemption language into the Special Circumstances box:

**This is a project under DOD ownership and is taking advantage of the process for energy and water data reporting that USGBC granted to the U.S. Department of Defense. Therefore this project is exempt from reporting the energy and water data required under this prerequisite.**

1. **Project Name:** [ ]
  2. **Project Address, City and State:** [ ]
  3. **DOD support agency or military department:** [ ]
  4. **Base or Installation name:** [ ]
- There will be an “N” in the box under “Summary” next to Prerequisite Completed. It is acceptable to submit the form like this.

For the **Energy Efficiency Prerequisite, Building-Level Energy Metering** in LEED Online:

- Select your rating system.
- Select the unit of measure used.
- **Do** comply with and check the box next to “The project has permanently installed, building-level energy meters that account for all sources of energy delivered to the building by an external provider, as listed in EA Prerequisite Minimum Energy Performance.”
- **Do NOT** “Upload: Letter of commitment” to share energy usage data.
- In the section that prompts select one of the following: Third-party data source or USGBC-approved data template, **leave both blank**.
- Fill in the brackets below with the appropriate information for the project claiming exemption (do NOT use acronyms or shorthand). Then copy and paste the completed exemption language into the Special Circumstances box:
  - This is a project under DOD ownership and is taking advantage of the process for energy and water data reporting that USGBC granted to the U.S. Department of Defense. Therefore this project is exempt from reporting the energy and water data required under this prerequisite.**
  - 1. Project Name: [ ]**
  - 2. Project Address, City and State: [ ]**
  - 3. DOD support agency or military department: [ ]**
  - 4. Base or Installation name: [ ]**
- There will be an “N” in the box under “Summary” next to Prerequisite Completed. It is acceptable to submit the form like this.

USGBC has granted approval for all LEED v2.2, 2009 and v4 Department of Defense projects in regards to WEp1 Water Use Reduction to use a standard 80:20 male to female gender ratio in the water use calculations for the military occupants. This blanket approval applies to all Department of Defense projects registered under LEED v4, 2009 and v2.2 regardless of registration date.

**When a DOD project claims this exemption, they must provide the following within the Special Circumstances Narrative box in WEp1:**

*This is a project under U.S. Department of Defense ownership and is taking advantage of the approval that USGBC granted to the U.S. Department of Defense as of **April 2, 2014** to use a standard 80:20 male to female gender ratio in the water use calculations for the military occupants.*

*Project Name: XXX*

*Project Address, City and State: XXX*

*DOD Base or Installation name: XXX*

**All other forms and documentation should be provided as typically required.**

## **Appendix B – RFP Sample Text (Design/Build, Single Contractor)**

The USACE RFP Wizard section templates are coordinated with HQUSACE for sustainable design content and reflect the guidance contained in this Implementation Guide. With the introduction of LEED v4, it has become much more difficult to integrate specific sustainability requirements within the body of template RFPs without creating potential inconsistencies and conflicts. Credit numbers, titles and requirements have changed significantly between v2009 and v4.

To that end, all specific LEED requirements have been migrated to a newly revised Appendix L. Two “Appendix L’s” have been developed - one for LEED v2009 and one for LEED v4. These appendices each contain all specific credit and certification requirements that were previously scattered throughout the body RFP sections.

This means that all sections of the template RFP have been and will need to be "scrubbed" for specific LEED credit and title information:

1. No specific credits or credit requirements are referenced in the body paragraphs. Generic references to LEED and sustainability efforts are acceptable, but any specific LEED credit references have been diverted to the appropriate “Appendix L.”
2. If there is sustainability related information that needs to remain in Wizard body paragraphs, ensure that it is “credit number and title neutral.” The point is that it should not reference an exact number and/or credit title.

An example of this is that Paragraph 6 previously included information regarding the project site and its compliance with v2009 Site Selection Requirements including whether the site is classified as prime farmland, relation to 100-year flood elevation and habitat for endangered species. This information should remain in paragraph 6, but it should be included under the heading "Site Sustainability Information," or similar. Don't reference SS Credit 1 or the like in the paragraph heading.

The "Appendix L" documents are currently being developed in parallel should be available for use on projects on or around 1 November 2014.

For more information on the RFP Wizard, visit the MRSI website at <https://mrsi.erdcdren.mil/Pages/RFP-Wizard.aspx> or download the RFP Implementation Guide at <http://mrsi.usace.army.mil/rfp/Shared%20Documents/RFPImplementationGuidelines.pdf>.

## **Appendix C – Sample LEED v4 Scorecard**

A basic set of LEED v4 Scorecards including credits and associated credit values can be found on the USGBC website at <http://www.usgbc.org/search/leed%20v4%20checklist>. A fill-able document that allows a PDT to track credits on a project by project basis as well as status, ownership, roles/responsibilities, etc. can be found on the MRSI website at <https://mrsi.erd.c.dren.mil/sustain/Pages/Policy.aspx>.



		<b>POSSIBLE: 1</b>
IP102	Integrative process	1

<b>LOCATION &amp; TRANSPORTATION</b>		<b>POSSIBLE: 32</b>
LT101	LEED for Neighborhood Development location	16
LT102	Sensitive land protection	1
LT103	High priority site	2
LT104	Surrounding density and diverse uses	5
LT107	Access to quality transit	5
LT108	Bicycle facilities	1
LT110	Reduced parking footprint	1
LT111	Green vehicles	1

<b>SUSTAINABLE SITES</b>		<b>POSSIBLE: 104</b>
SS101	Construction activity pollution prevention	REQUIRED
SSp1	Construction activity pollution prevention	REQUIRED
SS104	Site assessment	1
SSc1	Site selection	1
SS105	Site development - protect or restore habitat	2
SSc2	Development density and community connectivity	5
SS107	Open space	1
SSc3	Brownfield redevelopment	1
SS108	Rainwater management	3
SSc4.1	Alternative transportation - public transportation access	6
SSc4.2	Alternative transportation - bicycle storage and changing rooms	1
SSc4.3	Alternative transportation - low-emitting and fuel-efficient vehicles	3
SSc4.4	Alternative transportation - parking capacity	2
SS110	Heat island reduction	2
SSc5.1	Site development - protect or restore habitat	1
SSc5.2	Site development - maximize open space	1
SS112	Light pollution reduction	1
SSc6.1	Stormwater design - quantity control	1
SSc6.2	Stormwater design - quality control	1
SSc7.1	Heat island effect - nonroof	1
SSc7.2	Heat island effect - roof	1
SSc8	Light pollution reduction	1

<b>WATER EFFICIENCY</b>		<b>POSSIBLE: 46</b>
WE101	Outdoor water use reduction	REQUIRED
WEp1	Water use reduction	REQUIRED
WE102	Indoor water use reduction	REQUIRED
WE104	Building-level water metering	REQUIRED
WE901	Outdoor water use reduction	2
WEc1	Water efficient landscaping	4
WEc1.1	Water efficient landscaping - reduce by 50%	1
WEc1.2	Water efficient landscaping - no potable water use or no irrigation	1
WE902	Indoor water use reduction	6
WEc2	Innovative wastewater treatment and reuse	2
WE110	Cooling tower water use	2
WEc3	Water use reduction	4
WEc3.1	Water use reduction - 20% reduction	1
WEc3.1-3.2	Water use reduction	2
WEc3.2	Water use reduction - 30% reduction	1
WE112	Water metering	1

<b>ENERGY &amp; ATMOSPHERE</b>		<b>POSSIBLE: 154</b>
EA101	Fundamental commissioning and verification	REQUIRED
EAp1	Fundamental commissioning of building energy systems	REQUIRED
EA103	Minimum energy performance	REQUIRED
EAp2	Minimum energy performance	REQUIRED
EA106	Building-level energy metering	REQUIRED
EAp3	Fundamental refrigerant management	REQUIRED
EA108	Fundamental refrigerant management	REQUIRED
EA110	Enhanced commissioning	6
EAc1	Optimize energy performance	19
EAc1.1-1.5	Optimize energy performance	10
EA903	Optimize energy performance	18
EAc2	On-site renewable energy	7
EAc2.1	Renewable energy - 5%	1
EAc2.1-2.3	Renewable energy	3
EAc2.2	Renewable energy - 10%	1
EAc2.3	Renewable energy - 20%	1
EA118	Advanced energy metering	1
EAc3	Enhanced commissioning	2
EA121	Demand response	2
EAc4	Enhanced refrigerant management	2
EA123	Renewable energy production	3
EAc5	Measurement and verification	3
EA126	Enhanced refrigerant management	1
EAc6	Green power	2
EA128	Green power and carbon offsets	2

<b>MATERIAL &amp; RESOURCES</b>		<b>POSSIBLE: 80</b>
MR101	Storage and collection of recyclables	REQUIRED
MRp1	Storage and collection of recyclables	REQUIRED
MR103	Construction and demolition waste management planning	REQUIRED
MR108	Building life-cycle impact reduction	5
MRc1.1	Building reuse - maintain existing walls, floors and roof	3
MRc1.2	Building reuse - maintain interior nonstructural elements	1

<b>MATERIAL &amp; RESOURCES</b>		<b>CONTINUED</b>
MRc1.3	Building reuse - maintain 100% of shell/structure and 50% of non-shell/non-structure	1
MR112	Building product disclosure and optimization - environmental product declarations	2
MRc2	Construction waste management	2
MRc2.1	Construction waste management - divert 50% from landfill	1
MRc2.1-2.2	Construction waste management	2
MRc2.2	Construction waste management - divert 75% from landfill	1
MR114	Building product disclosure and optimization - sourcing of raw materials	2
MRc3	Materials reuse	2
MRc3.1	Resource reuse - 5%	1
MRc3.1-3.2	Resource reuse	2
MRc3.2	Resource reuse - 10%	1
MR115	Building product disclosure and optimization - material ingredients	2
MRc4	Recycled content	2
MRc4.1	Recycled content - 5% (post-consumer + 1/2 pre-consumer)	1
MRc4.1-4.2	Recycled content	2
MRc4.2	Recycled content - 10% (post-consumer + 1/2 pre-consumer)	1
MR123	Construction and demolition waste management	2
MRc5	Regional materials	2
MRc5.1	Local/regional materials - 20% manufactured regionally	1
MRc5.2	Local/regional materials - 50% extracted regionally	1
MRc6	Rapidly renewable materials	1
MRc7	Certified wood	1

<b>INDOOR ENVIRONMENTAL QUALITY</b>		<b>POSSIBLE: 91</b>
EQ101	Minimum IAQ performance	REQUIRED
EQp1	Minimum IAQ performance	REQUIRED
EQ104	Environmental tobacco smoke control	REQUIRED
EQp2	Environmental Tobacco Smoke (ETS) control	REQUIRED
EQ110	Enhanced IAQ strategies	2
EQc1	Outdoor air delivery monitoring	1
EQ112	Low-emitting materials	3
EQc2	Increased ventilation	1
EQ113	Construction IAQ management plan	1
EQc3.1	Construction IAQ management plan - during construction	1
EQc3.2	Construction IAQ management plan - before occupancy	1
EQ114	IAQ assessment	2
EQc4.1	Low-emitting materials - adhesives and sealants	1
EQc4.2	Low-emitting materials - paints and coatings	1
EQc4.3	Low-emitting materials - flooring systems	1
EQc4.4	Low-emitting materials - composite wood and agrifiber products	1
EQ115	Thermal comfort	1
EQc5	Indoor chemical and pollutant source control	1
EQ117	Interior lighting	2
EQc6.1	Controllability of systems - lighting	1
EQc6.2	Controllability of systems - thermal comfort	1
EQ121	Daylight	3
EQc7.1	Thermal comfort - design	1
EQc7.2	Thermal comfort - verification	1
EQ123	Quality views	1
EQc8.1	Daylight and views - daylight	1
EQc8.2	Daylight and views - views	1
EQ124	Acoustic performance	1

<b>INNOVATION</b>		<b>POSSIBLE: 33</b>
IDc1	Innovation in design	5
IN101	Innovation	5
IDc2	LEED Accredited Professional	1
IN102	LEED Accredited Professional	1

<b>REGIONAL PRIORITY</b>		<b>POSSIBLE: 12</b>
RPc1	Regional priority	4

**TOTAL** **553**

## **Appendix D – Training**

Training of key Army personnel, PDTs, and Army facilities stakeholders, whether as orientation during the course of project execution, or via separate venues, provides the foundation and detailed knowledge for Army project stakeholders to effectively implement LEED as a sustainable building rating tool for Army new construction projects.

Orientation/Basic SDD LEED – Basic orientation training covering SDD, LEED-NC should be provided to the PDT as a minimum at the Planning and Code 3 Design Charrettes.

USGBC LEED Training – USGBC sponsors or provides many forms of training, both introductory and advanced. Many are online and offered at no cost. Others are covered under the U.S. Army’s USGBC membership. USGBC training resources can be viewed on the USGBC website at <http://www.usgbc.org/education>. Army-subscribed resources can be best accessed by logging into your Army-linked USGBC account and selecting the Education@USGBC link in your account profile. Ensure that your user account is linked to the U.S. Army’s USGBC membership account. This may be done by selecting the U.S. Army as your company during account creation or by adding the corporate ID, available through your local SDD POC.

USACE LEED Implementation Training – USACE offers short workshops, practicums, webinars and week-long PROSPECT classes on LEED and USACE-specific implementation of LEED. The Sustainability Building Design and Construction PROSPECT course follows the LEED BD&C criteria along with federal and Army mandates. The Sustainability Existing Building Operations and Maintenance PROSPECT course follows the LEED EBOM criteria along with federal and Army mandates. There are also courses on Low Impact Design and Master Planning Energy and Sustainability Factors as well as courses being developed on Measurement and Verification, Building Envelope/Air Barrier and Life Cycle Cost Analysis. Contact Scott Wick, HQUSACE, [Scott.C.Wick@usace.army.mil](mailto:Scott.C.Wick@usace.army.mil) for information on the courses, workshops and webinars or to arrange training for your office.

LEED Professional Accreditation – The MSC and District Sustainability Design and Development/Energy POCs as well as select installation personnel and PDT members should obtain USGBC LEED Professional Accreditation to establish critical expertise on LEED for Army facilities projects. The LEED Accreditation and Credential Maintenance program is administered by GBCI. The accreditation exam ensures that the successful candidate has the knowledge and skills necessary to participate in the design process, to support and encourage integrated design, and to streamline LEED application and certification. It further tests candidate understanding of green building practices and principles, and familiarity with LEED requirements, resources, and processes. Information on becoming a LEED Accredited Professional (LEED AP) may be obtained at <http://www.usgbc.org/credentials>.

The LEED credential testing is provided at local Prometric testing sites. Information on Prometric is available at <http://www.prometric.com>.

## **Appendix E – Frequently Asked Questions (FAQs)**

Responses to frequently asked questions on the implementation of LEED BD+C. Other FAQs may be listed in previous versions of the LEED Implementation Guide. Districts should go through their District LEED POC, then MSC, then DX then HQUSACE when asking additional questions.

### **What Is LEED? (Leadership in Energy and Environmental Design)**

LEED is a third party sustainability accreditation program administered by USGBC and GBCI. See Appendix F for more details.

### **I work for the Army Corps of Engineers at an Installation – Am I a member of the USGBC? Do I qualify for USGBC Member Discounts?**

Technically, businesses and organizations are members of USGBC, not individuals. That said, all civilian employees of and uniformed members of the Army are eligible for applicable benefits and discounts on USGBC goods and services under the U.S. Army's membership. Ensure that your user account is linked to the U.S. Army's USGBC membership account. This may be done by selecting the U.S. Army as your company during account creation or by adding the corporate ID, available through your local SDD POC.

### **Is LEED required for USACE Civil Works projects on USACE owned property?**

Yes. Laws applicable to all federal facilities apply and the USACE Environmental Operating Principles apply.

### **Does each project team need to have a LEED Accredited Professional? Is the requirement for all design and construction teams to include a LEED AP applicable to OCONUS projects?**

Yes – both design and construction teams, and it is applicable to OCONUS Army projects using LEED as well. However, if the project is using equivalent host nation criteria, the host nation criteria credentials may be used instead. Project teams with a LEED Accredited Professional who is a principal participant tend to create projects with higher LEED ratings. Ensure that hired project design and construction teams have a LEED Accredited Professional (with appropriate specialty) on the team. If necessary, hire consultants to supplement in-house design teams with a LEED Accredited Professional to insure the Army LEED requirements will be met.

### **Do I have to become a LEED Accredited Professional?**

No it is not required that all Army project team members become LEED Accredited Professionals, but it is highly recommended, and would be a good career move. USACE may cover the cost of accreditation, speak with your supervisor about that possibility.

Corps of Engineers, Installation personnel, and project team members are encouraged to take the “LEED Accreditation” courses and exams offered by GBCI to become LEED accredited professionals, so they can contribute their expertise to projects.

**How do I become a LEED Accredited Professional?**

LEED Professional Accreditation is awarded to building industry practitioners who successfully pass a comprehensive exam which tests for a detailed knowledge of LEED project certification requirements and processes and a command of integrated design principles. Visit the USGBC Website at <http://www.usgbc.org/credentials> to learn more about how you can become a LEED Accredited Professional.

**DLA has just issued its LEED policy letter which differs from Army LEED policy and USACE guidance. Specifically the policy requires LEED Silver achievement for all new or renovated inhabited facilities that are MILCON or SRM projects over \$750,000 and states that the decision to register Silver projects is to be made on a case-by-case basis. For a USACE-executed DLA facility on Army property, which criteria governs?**

For purposes of determining inter-agency applicability, the most stringent requirement of the two will govern (comply with both). So for an inhabited building with no climate control for human comfort, DLA policy requires Silver whereas Army policy does not.

**For Army projects that are exempt from LEED Silver do we have to register them and produce LEED documentation using the Letter Templates (Forms)?**

You do not register them but you do produce documentation. See paragraph 9 Project Registration and paragraph 10 Project Documentation.

**We require a LEED AP for all design and construction teams. Does the construction contractor’s LEED AP have to be on site during construction?**

Current guidance does not mandate specific on-site hours for contractor’s LEED AP. Recommend consider how effectively the LEED AP responsibilities are being addressed and coordinate with the Contractor. You may require a certain number of hours on-site or certain hours at critical points during the design and construction process.

**As construction agent to the Air Force, what does the Air Force expect for their LEED certification?**

The Air Force currently requires that all project be certified LEED silver. Register the project and use the LEED Forms per the customer’s instructions.

**How can I get a copy of the LEED v4 Reference Guide?**

The cheapest and most efficient way is to use the online reference guide that the Army receives under their USGBC membership. Go to [www.usgbc.org/credits](http://www.usgbc.org/credits) to access. If you are not logged in under a USGBC account tied to the Army membership number, you will only have access to partial content, but if logged in, you will have access to the full suite of resources.

If your member account is linked to the Army's membership account, access to educational content, as well as the reference guide can be accessed via the Education @USGBC found in your account information page. When logged in with an account linked to the Army, there is a direct link to web-based reference guide.

You can also purchase downloadable PDF and hardcopies from USGBC. All civilian employees of and uniformed members of the Army are eligible for discounts under the U.S. Army's corporate USGBC membership. Ensure that your user account is linked to the U.S. Army's USGBC membership account. This may be done by selecting the U.S. Army as your company during account creation or by adding the corporate ID, available through your local SDD POC.

To order LEED Reference Guides, please visit the USGBC website at <http://www.usgbc.org/store/products/publications>.

**The Installation does not have a recycling policy or service. Does this cause us to fail on the MR prerequisite?**

USACE has the responsibility to provide a facility that meets the requirements for the LEED credits selected and coordinated with the Installation (as documented by the endorsements at the Prescribed Reporting Points). USACE is not responsible for how the building is operated after we turn it over. By providing the recycling area in the building the facility is ready to accommodate a recycling program when it is implemented.

**The User does not plan to use the designated carpool spaces as intended – they plan to re-designate them as reserved parking for individuals. Do we lose the carpool parking credit?**

USACE has the responsibility to provide a facility that meets the requirements for the LEED credits selected and coordinated with the Installation (as documented by the endorsements at the Prescribed Reporting Points). USACE is not responsible for how the building is operated after we turn it over. By providing the designated carpool parking spaces we have met the LEED requirement. The installation should be made aware, however, that GBCI reserves the right to audit projects after certification. Changing the function of those spaces after project completion may risk certification.

**What if the project scores less than LEED Silver? What action should we take when a contractor is failing/fails to meet contract requirements to achieve LEED Silver?**

See paragraph 4 for a description of the reporting actions required in the case of project failure. As for contract administration actions, LEED should be treated like any other contract

requirement. Design team failure (in-house or AE) is precluded by competent independent technical review that includes LEED. Construction contract documents need to incorporate all technical review comments and be back-checked prior to solicitation. The Government's options for non-compliance to influence contractor's behavior include interim unsatisfactory performance evaluation, withholding of progress payments and lastly termination for default and re-procurement (Office of Council should be involved). The Contracting Officer can accept non-conforming work provided the Government receives appropriate consideration but this would require technical determination of lost value, which with many LEED credits is nebulous at best. Consider the performance evaluation and effective monitoring your best tools to ensure compliance.

**Can the PDT require the project to score higher than LEED Silver or seek certification when not required?**

Guidance on this topic varies depending upon the Army and USACE guidance available at the time. To date, the PDT may pursue higher certification within budgetary constraints AND as long as it is determined that pursuing additional credits is life-cycle cost effective in accordance with applicable criteria.

**For Indoor Water Use Reduction credit, the GBCI LEED design reviewer does not accept the male/female ratio of the building without supporting data that demonstrates that this ratio will apply for the life of the building. What should I do?**

The DoD has been granted a waiver (dated 2 April 2014) by USGBC acknowledging and accepting a 80/20 male/female ratio for purposes of WE credit documentation. That said, if a project design includes fixtures at a ratio different than 80/20, it is strongly encouraged to USE THE ACTUAL RATIO AS DESIGNED calculated fixture ratio. This is a more accurate approach that yields a stronger calculation of water reduction. See Appendix A – Army LEED Credit Guidance and Resources for the full waiver document and instructions.

**Are DoD projects required to share post-occupancy utility data as required by LEED minimum program requirements?**

Registration in LEED Online requires selection of the method the Owner will use for providing utility data. All DoD entities are exempt from this requirement. See Appendix A – Army LEED Credit Guidance and Resources, which contains a formal agreement from USGBC, exempting DoD facilities from energy and water meter data sharing requirements as well as instructions for documenting this on individual projects.

## **Appendix F – Glossary**

**ACSIM** – Army Chief of Staff for Installation Management

**Adapt-Build** – A project delivery approach where approved standard designs are site adapted, making only those changes absolutely necessary to fit site or circumstances and minimal changes to the building interiors. Adapt- Build is a type of Design-Bid Build procurement. Under the MILCON Transformation (See Below), Centers of Standardization are responsible for selecting the acquisition method to acquire standard facilities. Starting in FY08, acquisition will move from a “Design-Build” to “Adapt-Build” approach. Ultimately, “Adapt-Build” will be the preferred project delivery approach.

**AF** – Air Force

**Affirmative Procurement** – Federal agencies are directed by the Resource Conservation and Recovery Act (RCRA) to establish affirmative procurement programs to promote the purchase of products designated by Environmental Protection Agency (EPA) (for recycled or recovered content) and the US Department of Agriculture (USDA) (for bio-based content) except when these items do not meet availability, competition, performance, or price criteria.

**Affirmative Procurement Managers** – The individual responsible for the management of installation affirmative procurement program. Leads cross-functional team effort to educate installation personnel and provide program publicity.

**ASA-IEE** – Assistant Secretary of the Army for Installations Energy and the Environment

**AT/FP** – Anti Terrorism/Force Protection

**BCE** - Base Civil Engineer

**Beneficial Occupancy Date (BOD)** – The date agreed upon by an installation DPW, USACE, and tenant organization when administrative control of a facility under construction is transferred from USACE to the garrison commander via DD Form 1354. At this time, although all construction efforts at the facility construction site may not be completed (e.g., punch-list items and other relatively minor construction activities may still be required for facility construction to be considered complete), and USACE may need to continue administering the final stages of the project construction contract until such completion, the user may begin to occupy all or agreed upon parts of the facility and use it for its intended purpose.

**BRAC** – Base Realignment and Closure

**CCB** – Construction Criteria Base

**CERL** – Construction Engineering Research Lab

**CFC** – Chlorofluorocarbon

**CIR** – Credit Interpretation Ruling

**CFR** – Code of Federal Regulations

**Charrette, Planning** – A planning charrette is an intensive on-site project planning workshop attended by an interdisciplinary team to produce a quality, technically sound DD Form 1391 and a Charrette Report. The charrette lasts for several days, and the planning team consists of representatives of the installation using agency, DPW, DOIM, and others as appropriate; the USACE MSC and district; the IMA region director; and others, depending upon the project type. The user's needs and expectations are accurately defined in terms of functional and technical requirements; the facility and site requirements are described in sufficient detail to develop a project scope; and the project planning estimate is based on those requirements to provide a reliable project cost.

**Charrette, Design** – A design charrette is an intensive Code 3 Design work session, usually at the customer's site (including the NAF contracting officer for NAF construction projects). The charrette lasts for several days and is attended by the customer, designer (either in-house or Architect-Engineer), possibly representatives from regulatory agencies, and the USACE district project management team. The charrette process consists of a series of on-site interviews with the purpose of fully developing and quantifying the functional and technical requirements of the project, including cost estimates. The information obtained at the charrette is used in the project definition submittal.

**Contingency Construction** – An overseas contingency construction requirement is a facility that the Army has no intention of retaining beyond the absolute minimum time necessary to complete the mission and exit the operational area.

**Continuous Building Program** – The USACE Continuous Building Program is a project delivery approach where a fixed pool of contractors provides a standard design facility at multiple sites under the direction of the Center of Standardization. The continuous building approach provides greater cost predictability to Army and industry, faster delivery of facilities at lower design costs, and an opportunity to continuously improve delivery processes and Army standard facility designs.

**COS** – Center of Standardization

**CPG** – Comprehensive Procurement Guidelines, by EPA.

**CTR** – Contractor

**DA** – Department of the Army

**DASA** – Deputy Assistant Secretary of the Army

**DLA** – Defense Logistics Agency

**DoD** - Department of Defense



**Department of Defense (DD) Form 1391** – The DD Form 1391 is a programming tool used to request and justify a construction need. It defines the site, scope and cost estimate for the project. It must be relevant, factual, clear and concise. The documentation and cost estimates ensure functionality, operability, maintainability, efficiency, and economy. It clearly defines the user's needs and expectations for the selected site.

**Design-Bid-Build (DBB)** – Design-Bid-Build is the traditional owner driven project delivery method where design and construction activities are separate. The project is fully designed by a design / engineering team either in-house at the DPW or Corps of Engineers District or by Architect-Engineer (AE) contract according to program requirements established in the DD 1391. Following the completion of design and construction documents, a separate contract is awarded to construct the project in accordance with the plans and specifications.

**Design-Build (DB)** – A project delivery method where one contractor is selected for both design and construction of a project under a single contract. The DB method uses competitive evaluation of technical proposals to select a contractor to design and build the project. For a contract award, the selection decision may be based on the best value to the Government from the combination of quality, management expertise, and price, but not necessarily the lowest price. Another selection method may be based on the lowest priced, technically acceptable proposal. This second method often is used for smaller scale or less complex projects that do not require a detailed technical proposal.

**DPW** – Department of Public Works

**E&C** – Engineering and Construction

**EA** – Energy and Atmosphere

**ECB** – Engineering and Construction Bulletin

**EISA** – Energy Independence and Security Act

**ELL** – Enterprise Lessons Learned

**EO** – Executive Order

**EPA** – Environmental Protection Agency

**EPACT 05** – Energy Protection Act of 2005

**EPP** – Environmentally Preferable Purchasing

**EQ** – Indoor Environmental Quality

**ERDC** – Environmental Research and Development Center

**ETS** – Environmental Tobacco Smoke

**FAQ** – Frequently Asked Questions

**FAR** – Federal Acquisition Regulation

**FY** – Fiscal Year

**GBCI** – Green Building Certification Institute

**GD** – Geographic District

**Gross Square Footage** – Aggregate building area over all floor levels of a facility. Exact definitions for gross square footage vary depending upon the requesting authority (USGBC, Army, etc). Consult guidance from the appropriate source for firm definitions.

**HPSB** – High Performing Sustainable Buildings

**HVAC** – Heating Ventilating and Air Conditioning

**IAQ** – Indoor Air Quality

**ID** – Innovation and Design

**I&E** – Installations and Environment

**IEE** – Installations, Energy and the Environment

**IMCOM** – Installation Management Command

**Interim Facility** – An interim facility requirement is a short-term (normally 3 years or less) urgent requirement for facilities due to transitory peak military missions, deployments, military contingency operations, disaster relief requirements, or pending approval and construction of real property facilities via normal military construction programs.

**ISWG** – Interagency Sustainability Working Group

**KBTU/hr** – Thousand British Thermal Units per hour

**LEED (Leadership in Energy and Environmental Design)** — The nonprofit U. S. Green Building Council (USGBC) is the nation’s foremost coalition of leaders from across the building industry working to promote buildings that are environmentally responsible, profitable and healthy places to live and work. USGBC has developed a suite of nationally recognized LEED green building rating systems which are available for Building Design and Construction, Interior Design and Construction, Building Operations and Maintenance, Neighborhood Development, and Homes. See [www.usgbc.org](http://www.usgbc.org) for more information.

## **LEED AP – LEED Accredited Professional**

**LEED BD+C (LEED for Building Design and Construction)** – U.S. Green Building Council’s (USGBC) Leadership in Energy and Environmental Design, Building Design and Construction (LEED BD+C) Green Building Rating System® for New Construction & Major Renovations is a voluntary, consensus-based national standard for developing high-performance, sustainable buildings.

**LEED O+M** – The USGBC’s LEED Green Building Rating System for Existing Building Operations and Maintenance.

**LEED Silver Level** – The Army mandated minimum level of performance of LEED for Army facilities as directed by the Army starting with the FY 08 MCA program. Silver is the second performance level in the LEED Green Building Rating System®, “Certified,” “Silver,” “Gold” and “Platinum.”

**LEED Online** – To be certified by GBCI under the LEED system, projects must be registered and compile all project LEED documentation at LEED Online. LEED-Online is a user-friendly interface that enables project team members to upload credit templates, track Credit Interpretation Requests (CIRs), manage key project details, contact customer service, and communicate with reviewers throughout the design and construction reviews. With LEED Online, all LEED information, resources, and support are accessible in a centralized location. LEED Online is available at [www.usgbc.org/leedonline](http://www.usgbc.org/leedonline).

**LEED Forms** – Pre-formatted submittal sheets for documentation of each LEED prerequisite and credit in the LEED certification process. The forms outline the specific project data needed to demonstrate achievement of the LEED performance requirements and include calculation formulas where applicable.

**Life Cycle Costs Analysis/Whole Building Integrated Design Process** – Life-cycle cost analysis (LCCA) is a method for assessing the total cost of facility ownership. It takes into account all costs of acquiring, owning, and disposing of a building or building system. LCCA is especially useful when project alternatives that fulfill the same performance requirements, but differ with respect to initial costs and operating costs, have to be compared in order to select the one that maximizes net savings. (The Whole Building Design Guide, <http://www.wbdg.org/design/lcca.php>)

The design of buildings requires the integration of many kinds of information into a synthetic whole. An integrated process, or "whole building" design process, includes the active and continuing participation of users, code officials, building technologists, cost consultants, civil engineers, mechanical and electrical engineers, structural engineers, specifications specialists, and consultants from many specialized fields. The best buildings result from active, consistent, organized collaboration among all players. (Army PDT) (The Whole Building Design Guide, <http://www.wbdg.org/design/engageprocess.php>)

**LT** – Location and Transportation

**MCA** – Military Construction Army

**MILCON** – Military Construction

**MILCON Transformation (MT)** – The goal of MILCON Transformation is to deliver quality Army facilities in less time, for lower costs and achieving Army sustainable design and development standards. MILCON Transformation places greater emphasis on master planning, the facility proponent setting facility requirements and standards, and the standardization of facilities and delivery processes. The Corps will change the way it executes Army MILCON to a continuous building program. It allows for expanded use of all types of construction and manufactured building solutions. It maximizes use of industry standards by using international building codes and focusing on performance/product and not “how to.”

**Model Request for Proposals (RFP)** – A standardized, centrally controlled USACE RFP used for DB Army projects.

**MPR** – Minimum Program Requirements

**MSC** – Major Support Command

**M&V** – Measurement and Verification

**N/A** – Not Applicable

**NIC** – Not in Contract

**OPR** – Owner’s Project Requirements

**P2 Database Entry** – P2 is the U. S. Army Corps of Engineers’ program and project management tool supporting the Corps’ corporate, regional, and district-level project management business processes. It is a suite of commercial-off-the-shelf (COTS) software applications configured to support project execution in all areas of the Corps responsibility, and provides a corporate database for decision support capability.

**PDT** – Project Delivery Team

**PM** – Project Manager

**PR** - Prerequisite

**QA/QC** – Quality Assurance/Quality Control

**REC** – Regional Energy Credits

**RFP** – Request for Proposal

**RIT** – Regional Integration Team

**RP** – Regional Priority

**S&A** – Supervision and Administration

**SRM** – Sustainment Restoration and Modernization

**SS** – Sustainable Sites

**Sustainable Project Rating Tool (SPiRiT)** – The Sustainable Project Rating Tool (SPiRiT) is a self-assessing system designed to help the Army achieve facilities that meet the needs of current missions and accommodate future missions in a sustainable cost-effective, environmentally friendly manner: SPiRiT was developed in response to Executive Order 13123 – Federal Leadership in Energy Management, which required DoD to develop SDD principles. SPiRiT is based on the U. S. Green Building Council’s LEED 2.0™ tool. Army transitioned from SPIRiT to LEED partially in FY08 and completely in FY13.

**UFC** – Unified Facilities Criteria

**USACE** – United States Army Corps of Engineers

**USDA** – United States Department of Agriculture

**USGBC** – U.S. Green Building Council

**Vertical Building Construction Projects with Climate-Controlled Spaces** – Installation infrastructure is typically defined as “vertical,” such as buildings, or “horizontal” such as roads, utilities, airfields and ranges. Climate control is defined, for purposes of this guidance, as mechanical heating and/or cooling of a space for human comfort.

**V** – Version

**WBDG** – Whole Building Design Guide

**WE** – Water Efficiency

## Appendix G – LEED Registration

### Typical Registration Procedure:

1. Login, complete the online registration form (see guidance below) at the USGBC LEED Online website <http://www.usgbc.org/leedonline> and submit it online.
2. Pay the registration fee via credit card (USACE staff: credit card or government purchase request PR&C is funded by project design or S&A funds).
3. GBCI will follow up with a final invoice, the LEED Online passwords and template information.
4. The individual who registers the project online is, by default, the Project Administrator.

### Completing the Registration Form

#### BEFORE YOU BEGIN:

1. Create a personal account with USGBC if you do not have one.
2. Link personal account to Army's corporate membership account. See additional information below.
3. You will need the following information to register a project:
  - a. Which certification system and version to register the project under.
  - b. Project name as it appears in P2 (obtain from USACE Project Manager)
  - c. Building number/physical address of project
  - d. Zip code for Installation/project location
  - e. Anticipated construction start and end dates
  - f. Building Type AND Real Property Unit Identifier (RPUID)
  - g. Total building gross area
  - h. Owner Name
  - i. Owner Organization
  - j. Total construction cost for building only (see Project Details Section instructions below)

#### ACCOUNT/LOGIN INFORMATION:

1. The person registering the project **must have an account with USGBC** (login and password) to complete the form. Go to <http://www.usgbc.org/leedonline> and login using your USGBC login info. Click the "create new project" button to start the project registration process. IMPORTANT: USACE team members are eligible for USGBC member pricing under the U.S. Army's corporate membership. Individuals registering projects should ensure that their user account is linked to the U.S. Army's USGBC membership account. This may be done by selecting the U.S. Army as your company during account creation or by adding the corporate ID, available through your local SDD POC.
2. The Project Details page is filled out by the person registering the project. It may be a Contractor or a USACE staff member, but keep in mind that WHOEVER

REGISTERS THE PROJECT WILL BECOME THE DEFAULT PROJECT ADMINISTRATOR.

**PROJECT DETAILS PAGE:**

1. **Registration Type:** Select the project type that you intend to register (either single project or campus). These instructions are specified for a single project, but the process is very similar for campuses.
2. **Project Name:** ALWAYS begin Project Name with “ARMY” (or “AF”, “DLA” as appropriate) followed by the project PN number, project name and/or building name. Contact the USACE Project Manager for this information. Example: “ARMY PN54321 Barracks 2”. For other customers it is acceptable to add the customer’s PN in parentheses after. Example: ARMY PN54321 Barracks 2 (AF PN EIE623).
3. **Group Certification Project:** Select NO, unless special circumstances allow for group certification.
4. **Unit Type:** Select IP or SI units as applicable (IP units typical).
5. **Anticipated Construction Start and End Dates:** Note Self-explanatory – give your best guess if unknown.
6. **Anticipated Project Type:** Select the most appropriate option from the drop-down menu.
7. **Gross Square Footage:** Provide total aggregate plan area of the building. Exclude the area of any buildings that are exempt from the LEED achievement requirement (for example, exclude an unconditioned storage shed to be constructed with a barracks complex).
8. **Owner Organization:** U.S. Army Corps of Engineers. **This field MUST be completed this way because it will be used as a search field by HQUSACE to find all USACE registered projects. You may supplement it with district name at the end but DO NOT revise or use an acronym.**
9. **Owner Name and Email Address:** The Project Owner representative during design and construction up until acceptance of final LEED certification is the USACE Project Manager or delegated individual. Immediately prior to occupancy change the Project Owner POC to the Department of Public Works Director or Base Civil Engineer.
10. **Is Project Private?:** DO NOT check this box unless the project has security sensitivity (elements that are FOUO or higher security).
11. **Was This Project Previously Certified?:** DO NOT check this box unless applicable.
12. **Project Address:**
  - a. **Project Address 1 and 2:** This is the physical location of the project. For the first line provide facility number, street address, block number or whatever is known to best describe the location of the project on the Installation. For the second line provide the base identification code, category code and real property unique identification code (RPUID). These can be requested from the real estate officer at the installation. Example format: “xxxx, xxxxxx, xxxxxxxxxxxxxxxxxxxxxxx”.
  - b. **Project City:** Installation Name Example: “Fort Riley” or “Tyndall Air Force Base”
  - c. **State, Country, Postal Code:** Self-explanatory

- d. **Geo Location:** Enter the project latitude and longitude, most easily done by selecting the location pin to the right of the field and placing the location pin on the map at the project location. When you exit out of the map tool, the coordinates will populate in the field.

**AGREEMENT PAGE:**

1. Follow directions (review and accept the terms and conditions if applicable).
2. If project does not meet MPRs, DO NOT PROCEED and contact PM for direction.

**PAYMENT INFORMATION AND RECEIPT:**

1. Self-explanatory



## Appendix H – Waivers

**When a Waiver is Required:** Any Army project, standard design or program that is not expected to fully comply with Army LEED policy within funds available requires a waiver. Any Army project, standard design or program proposing use of a rating tool or criteria other than the Army LEED policy requires a waiver. NOTE: Tenant projects do not submit waiver requests; noncompliance is coordinated with Installation DPW.

The waiver authority for this type of waiver is Chief of Engineering & Construction at HQUSACE for the Army and Director of Air Force Civil Engineering Center Facilities Directorate (AFCEC/CF) for the Air Force.

**When a Waiver Request is Submitted:** As soon as the expected failure or need for a waiver is known. Failure due to technical infeasibility or project scope should be determined no later than Code 3 submittal. Failure due to insufficient funding should be determined no later than concept design or draft RFP.

### The Waiver Process:

1. USACE primary POC: For a project the USACE Project Manager is responsible for coordinating and submitting the waiver request. For a program or standard design the Program Manager or COS Team Manager, as applicable, is responsible for coordinating and submitting the waiver request.
2. USACE Design Team prepares technical data for waiver request.
3. USACE primary POC prepares waiver request letter using the format in this appendix.
4. For a project waiver the USACE PM forwards completed waiver request to Installation Project Manager or project POC, IMCOM region POC and USACE MSC SDD POC and program manager (for informational purposes) comment/concurrence. For a program waiver the Program Manager forwards the completed waiver request to the IMCOM region POC and USACE MSC SDD POC for comment/concurrence. For a standard design waiver the COS Team Manager forwards the completed waiver request to the FDT for comment/concurrence.
5. Upon receipt of comments from all applicable parties in paragraph 4 the USACE primary POC forwards the waiver request letter WITH all comments through the normal waiver process for action with a copy to the HQUSACE SDD proponent. Waiver requests will NOT be acted upon by HQUSACE unless/until they are accompanied by comments from ALL applicable parties indicated in paragraph 4.
6. HQUSACE will coordinate waiver request with HQ USACE SDD proponent and ACSIM and notify MSC POC and USACE Primary POC of ACSIM decision.

### Format:

Cover letter on official district letterhead, signed by District Commander. Format to match attached sample.

MEMORANDUM FOR DIRECTOR OF MILITARY PROGRAMS, USACE (CEMP-ZA),  
441 G STREET NW, WASH, DC 20314-1000

SUBJECT: FY-XX, L.I. XXXXX, Project name and location

1. Request a waiver to allow the XXX District (XXX) to execute the subject project with the following portion of the work exempt from achieving Army LEED policy: [ ]
2. The primary reason for this request is [technical infeasibility due to scope] [inadequate funding] [excessive cost relative to facility cost] [request to substitute equivalent criteria] [adverse effect on mission performance] [adverse effect on security] [adverse effect on health safety or welfare] [ ]. See attached LEED waiver request form for additional information.
3. This request has been coordinated with Installation Project Manager, Installation Management Command regional representative and Major Support Command sustainable/energy design program manager. Comments from all parties are attached.
4. Your support in allowing the XXX District to execute the subject project with this change is requested. POC for this effort is XXX .

(District Commander Signature)

cc: MSC

USACE Army LEED Waiver Request

Project:

PN:

FY:

Location:

POC name and email:

Date:

Requirement Requested to be Waived (list each individual requirement on a separate line)	Portions of Project Request Applies to (list buildings)	Justification and Proposed Alternate Achievement if Applicable
LEED Silver Achievement		
LEED Certification		
Other (identify)		