DoDEA Facilities
Management Guide

Sustainability and Energy
Efficiency Program

Version 1.1 – 01 October 2013
# TABLE OF CONTENTS

## Acronyms

<table>
<thead>
<tr>
<th>Acronyms</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>4</td>
</tr>
<tr>
<td>Applicability</td>
<td>4</td>
</tr>
<tr>
<td>References</td>
<td>4</td>
</tr>
<tr>
<td>Responsibilities</td>
<td>5</td>
</tr>
<tr>
<td>Department of Defense Education Activity (HQ DoDEA)</td>
<td>5</td>
</tr>
<tr>
<td>DoDEA Area Offices (DDESS, DoDEA-Europe, DoDEA-Pacific)</td>
<td>6</td>
</tr>
<tr>
<td>User</td>
<td>6</td>
</tr>
<tr>
<td>Geographic District Team</td>
<td>6</td>
</tr>
<tr>
<td>Installation</td>
<td>6</td>
</tr>
<tr>
<td>DoDEA Design Center – Norfolk District Technical Manager (TM)</td>
<td>7</td>
</tr>
<tr>
<td>Procedures</td>
<td>7</td>
</tr>
<tr>
<td>Minimum LEED Rating Requirements</td>
<td>7</td>
</tr>
<tr>
<td>Planning and Programming Phase Requirements</td>
<td>7</td>
</tr>
<tr>
<td>Design Phase Requirements</td>
<td>8</td>
</tr>
<tr>
<td>Construction Phase Requirements</td>
<td>9</td>
</tr>
<tr>
<td>Schedule</td>
<td>9</td>
</tr>
<tr>
<td>Sustainability and Energy Efficiency</td>
<td>10</td>
</tr>
<tr>
<td>UFC 1-200-02 High Performance &amp; Sustainable Building Requirements</td>
<td>10</td>
</tr>
<tr>
<td>DoDEA Minimum Benchmark LEED Requirements</td>
<td>11</td>
</tr>
<tr>
<td>Commissioning</td>
<td>11</td>
</tr>
</tbody>
</table>

## Appendices

<table>
<thead>
<tr>
<th>Appendices</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appendix 1 – Owner’s Project Requirements Template</td>
<td>13</td>
</tr>
<tr>
<td>Appendix 2 – DoDEA LEED Implementation Guide</td>
<td></td>
</tr>
<tr>
<td>Appendix 3 – Building Enclosure Commissioning Plan Template</td>
<td></td>
</tr>
<tr>
<td>Appendix 4 – DoDEA LEED Guidance - Project Scorecard</td>
<td></td>
</tr>
<tr>
<td>Appendix 5 – MPR 6 Department of Defense Exemption Process</td>
<td></td>
</tr>
</tbody>
</table>
ACRONYMS

A/E
Architect/Engineer

AI
Administrative Instruction

AFCEC
Air Force Civil Engineer Center

ANSI
American National Standards Institute

ASHRAE
American Society of Heating Refrigeration and Air Conditioning

AT/FP
Anti-Terrorism / Force Protection

BAS
Building Automation System

BOD
Basis of Design

CAPM
Construction Agent Project Manager

CFM
Cubic Feet per Minute

COR
Contracting Officer’s Representative

CFC
Chlorofluorocarbon

Cx
Commissioning

CxA
Commissioning Authority

DDESS
Domestic Dependent Elementary and Secondary Schools

DD Form 1391
Military Construction Project Data Sheet

DoD
Department of Defense

DoDEA-Pacific
Department of Defense Education Activity – Pacific

DoDEA-Europe
Department of Defense Education Activity – Europe

DoDEA
Department of Defense Education Activity

EPA
Environmental Protection Agency

FC
Footcandles

FEMP
Federal Energy Management Program

GBCI
Green Building Certification Institute

HVAC
Heating Ventilation and Air Conditioning

IAQ
Indoor Air Quality

LEED
Leadership in Energy and Environmental Design

LEED AP
Leadership in Energy and Environmental Design Accredited Professional
1.0 PURPOSE

This guide establishes a Department of Defense Education Activity (DoDEA) Sustainability and Energy Efficiency Program and in support of DoDEA’s commitment to provide students with a world-class education.

2.0 APPLICABILITY

This guidance is applicable to the Department of Defense Education Activity, the US Army Corps of Engineers (USACE) Norfolk DoDEA Design Center, and Geographic Districts having DoDEA Military Construction (MILCON) responsibilities to include USACE, Naval Facilities Engineering Command (NAVFAC), and Air Force Civil Engineer (AFCEC). Exceptions and/or deviations to this guidance require written approval from DoDEA Headquarters.

This guidance is applicable to all DoDEA MILCON projects for FY 2015 and beyond and all prior year projects that have yet to conduct the 35% Design Charrette as of March 1, 2013. For all prior year projects that have already conducted award 35% design charrettes all federal mandates and benchmarks in place at the time of the contract are applicable as well as the previous DoDEA Sustainability and Energy Efficiency Administrative Instruction (AI) dated April 2, 2012. The one exception to the previous DoDEA DoDEA Sustainability and Energy Efficiency Administrative Instruction is the energy reduction goal is 30% against baseline and not 40% as stated in the AI.

3.0 REFERENCES

Unified Facilities Criteria (UFC) 1-200-02, High Performance and Sustainable Building Requirements, March 1, 2013


Subparts 436.1 through 436.24 of title 10, Code of Federal Regulations

DoD Directive 1342.6-M, Administrative and Logistics Responsibilities for DoD Dependents Schools, August 1995

DoD Directive 4270.5, Military Construction, February 15, 2005

DoDEA MILCON Program, Program Management Plan (PgMP) with HQUSACE, May 2010

DoDEA MILCON Program, Program Management Plan (PgMP) with NAVFAC, DRAFT

4.0 RESPONSIBILITIES

4.1. Department of Defense Education Activity, Headquarters (HQ DoDEA)

HQ DoDEA is responsible for providing support to achieve compliance with the provisions of this guide and appoint a Sustainability and Energy Efficiency Program Manager (SEEPM) with designated oversight of the development, application, and accountability for policies, procedures, and standards pertaining to sustainability and energy efficiency.

The HQ DoDEA SEEPM will provide the following:

- Oversight for the development, application, and accountability for policies, procedures, and standards pertaining to the Sustainability and Energy Efficiency Program.
- Assistance to the architect/engineer (A/E) registering projects with GBCI and tracking design credits through the completion of 100% design.
- Provide assistance to the construction contractor with the transfer of project administration from the A/E and tracking construction credits through the completion of the project.
- Support the DoDEA Area Offices in defining and achieving sustainability and energy efficiency goals.
- Review projects for compliance prior to GBCI design application and construction application.
- Review DoDEA-Pacific/DDESS-Guam project documentation for compliance with LEED Silver standards if actual certification is not pursued.
- Register facilities with Energy Star Portfolio Manager.

4.2. DoDEA Area Offices (DDESS, DoDEA-Europe, DoDEA-Pacific)

The DoDEA Area Offices will provide local oversight to ensure Military Construction (MILCON)
Project Delivery Teams are executing projects in compliance with the standards in this guidance document. The DoDEA Area Offices will provide a Project Manager (PM) who will coordinate and ensure compliance with the DoDEA sustainability and energy efficiency requirements with the Project Delivery Team (PDT). The DoDEA PM is responsible for reviewing all project documentation required by the Sustainability and Energy Efficiency Program for adequacy.

4.3. User

The User is defined as a representative(s) from the intended occupant of the facilities included in this project. This may consist of an individual, or team of individuals, that are integral in conveying and determining the requirements, the foundation of which are based on the Education Facility Specifications, of the group. The DoDEA PM can assist the User in determining the required representatives by describing the types of information and inputs required. The DoDEA PM shall work with the Users to identify opportunities to utilize “the school as a teaching tool” through integration of sustainable features of the school facility with the school’s educational mission. This group should include school faculty and administration, District Superintendents Office, Information Technology, Safety/Security, and Logistics/Facilities.

4.4. Geographic District Team

The Construction Agent Project Manager (CAPM), for USACE, NAVFAC, or AFCEC is responsible for providing technical guidance on implementing the DoDEA Sustainability and Energy Efficiency requirements into each project. The CAPM is responsible for selecting the appropriate credentialed LEED AP Project Delivery Team (PDT) members and managing all sustainability and energy efficiency activities during the design and construction phases as directed by the DoDEA Area Office PM. The CAPM is responsible for managing the technical team (A/E or in-house team). The CAPM should be proactive in engaging the Installation and ensuring their participation in the sustainability and energy efficiency activities.

The CAPM 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. Validation of design credits is part of design independent technical review/conformance review. Validation of construction credits is part of construction Supervision and Administration activities.

4.5. Installation

The Installation is responsible for working with the PDT to identify potential sustainability and energy efficiency strategies that are successful and have been implemented locally. DoDEA projects are not required to implement installation or service specific requirements, but the PDT will look to integrate with installation strategies where appropriate and within project budgets.
4.6. **DoDEA Design Center – Norfolk District Technical Manager (TM)**

The Norfolk District TM supports both the Geographic PM and DoDEA Area Office PM as a technical subject matter expert. The Norfolk District TM will provide planning reviews on both functional and programmatic levels to verify compliance with DoDEA Education Facilities Specifications and DoDEA energy and sustainability goals. The Design Center will participate as a member of Project Delivery Teams (PDTs); attend select planning meetings to ensure best practices; and collect lessons learned for application to future projects. The Design Center will provide training as required on emerging sustainability strategies.

### 5.0 PROCEDURES

#### 5.1. Minimum LEED Rating Requirements

The A/E and construction contractor for DDESS and DODDS-E projects must apply and receive Silver level LEED certification under GBCI’s most applicable current LEED rating system, or apply for a comparable rating under no less than an equivalent green building rating system, so long as a third party provides such rating. DoDEA-Pacific/DDESS-Guam projects will be designed and constructed to LEED Silver standards at a minimum, including completing all documentation required by GBCI and must meet all Federal Mandates. Certification levels higher than a Silver level are not authorized. The SEEPM will review documentation for compliance if actual certification is not pursued. Please refer to Section 5.2-5.4 for detailed instructions and requirements.

#### 5.2. Planning & Programming Phase Requirements

During the development and execution of the Parametric 15% Design phase the following sustainability and energy efficiency activities will be conducted to establish the baseline for the project to be used during subsequent design phases.

- The PDT will establish the project sustainability and energy efficiency performance goals and establish the appropriate budget to be included in the development of the DD Form 1391.
- The PDT will develop the initial Owner’s Project Requirements (OPR) document using the template provided in the Appendix.
- The PDT will develop the initial LEED Project Checklist and document the costs per credit in the Parametric Design Charrette Report using the template provided in the Appendix.

The CAPM will ensure that the LEED Project Checklist and OPR have been properly coordinated with all applicable stakeholders during the Parametric 15% Design phase of the project.
### 5.3. Design Phase Requirements

During development and execution of the Design phase at a minimum the following sustainability and energy efficiency activities will be conducted:

- The PDT will conduct an integrated sustainability and energy efficiency working session during the design charrette to review and validate goals and compliance requirements.
- The PDT will identify the LEED credits that will be integrated and incorporated during the design to meet Silver Certification.
- The PDT will conduct life cycle cost analysis (LCCA) on all sustainability and energy efficiency systems to validate life cycle effectiveness. Refer to detailed requirements below.
- The PDT will ensure that all LEED supporting documentation is submitted for each design submittal. Each design submittal will include the LEED Project Checklist identifying all credits claimed.
- The LEED project checklist resulting from the PDT’s final design will be endorsed by the Installation, the USACE Design Center, DoDEA Area Office PM, and HQ DoDEA.
- The Commissioning Authority (CxA) will develop and implement a complete design phase and draft construction phase commissioning plan.
- The CxA will develop and incorporate commissioning requirements into the construction documents.
- The CxA will develop the commissioning specification.
- The CxA will conduct, at a minimum, one commissioning design review of the owner’s project requirements (OPR), basis of design, and design documents no later than 35% concept design and back-check the review comments in the subsequent design submission.

Projects will be registered with GBCI by the A/E at or before the 35% design submittal using the current LEED for Schools Rating System. Please refer to the DoDEA LEED Implementation Guide at Appendix 2 for detailed instructions on the registration process. The A/E will be responsible for uploading the pertinent information required for design credits by GBCI to LEED Online. At completion of the 100% design, with approval of the SEEPM, the A/E will submit the project’s design application to GBCI. All comments from GBCI will be adequately addressed by the A/E throughout the certification process.

The A/E will perform LCCA that conforms to Sections 433 and 438 of Public Law 110-140, “Energy Independence and Security Act of 2007,” December 19, 2007 and Subparts 436.1 through 436.24 of title 10, Code of Federal Regulations. An initial LCCA will be performed during the 15% Parametric Design to determine initial feasibility of all sustainability and energy efficiency strategies. In all subsequent design phases LCCA will be documented as part of the basis of design. If it is determined that a requirement is not life cycle cost effective, then the highest level of cost effectiveness that is feasible for that requirement will be accomplished based upon an LCCA for less than full compliance as determined by the A/E and approved by the SEEPM.
5.4. **Construction Phase Requirements**

During the construction phase at a minimum the following sustainability and energy efficiency activities will be conducted:

- The A/E will transfer LEED project team administration to the construction contractor upon completion of GBCI design review and approval of the SEEPM after construction contract award.
- The construction contractor will be responsible for uploading the pertinent information required for construction credits by GBCI to LEED Online.
- The PDT will conduct a preconstruction conference to discuss LEED roles and responsibilities, goals and compliance requirements during construction.
- The construction contractor will update the LEED Online documentation on at least a monthly basis. Monthly review of LEED documentation by Construction Agent staff is required and progress payments will be coordinated with this review.
- The Construction Agent staff, SEEPM and Installation will review the LEED supporting documentation and may request additional audit documentation where deemed necessary.
- The CxA will finalize the draft construction commissioning plan.
- The CxA will review contractor construction submittals applicable to systems being commissioned for compliance with the OPR and basis of design. This review must be concurrent with the review of the A/E of record and CAPM. The CxA will verify the installation and performance of the systems to be commissioned.
- The CxA will complete a summary commissioning report.
- The CxA will be involved in reviewing the operation of the building with the Facility Manager responsible for operations and maintenance (O&M) and occupants within ten months after BOD and include a plan for resolving outstanding commissioning-related issues.

Financial closeout of contracts that require certification cannot occur until certification ruling showing achieved certification is obtained. GBCI does not require that post-occupancy credit activities be complete at the time of certification request but contract requirements must be completed prior to project financial closeout. Throughout the certification process the construction contractor will be required to answer questions from the GBCI Review Team and must remain available to support the certification process to achieve certification.

5.5. **Schedule**

The DoDEA sustainability and energy efficiency process is framed by the following key milestones in sequence.
### Milestone Tracked by Key Documents

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Planning &amp; Programming Phase</th>
<th>Design Phase</th>
<th>Construction Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Establish Sustainability and energy efficiency goals and performance</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>requirements</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Develop the OPR</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Develop the initial LEED Project Checklist</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Develop and manage the commissioning plan</td>
<td></td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>5. Validate LEED Project Checklist during the design charrette</td>
<td></td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>6. Conduct LCCA on all sustainability and energy efficiency systems</td>
<td></td>
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</tr>
<tr>
<td>7. Register the project with GBCI by the 35% design phase</td>
<td></td>
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</tr>
<tr>
<td>8. Receive endorsement on the LEED Checklist during the final design</td>
<td></td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>submittal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Submit design credits to GBCI via LEED Online</td>
<td></td>
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</tr>
<tr>
<td>10. Conduct preconstruction conference</td>
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<td>✔</td>
<td></td>
</tr>
<tr>
<td>11. Conduct commissioning activities</td>
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</tr>
<tr>
<td>12. Submit construction credits to GBCI via LEED Online</td>
<td></td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>13. Obtain GBCI LEED Certification</td>
<td></td>
<td>✔</td>
<td></td>
</tr>
</tbody>
</table>

### 6.0 SUSTAINABILITY AND ENERGY EFFICIENCY

#### 6.1 UFC 1-200-02 High Performance and Sustainable Building Requirements

This UFC provides minimum requirements and guidance to achieve high performance and sustainable facilities and is applicable to all DoDEA MILCON projects.

See Appendix 4 –DoDEA LEED Guidance – Project Scorecard, which provides UFC cross reference with minimum benchmark LEED credits.
6.2. **DoDEA Minimum Benchmark LEED Requirements**

In addition to meeting UFC requirements noted above, there are additional DoDEA minimum benchmark LEED requirements designed to support 21st Century Schools environments and DoDEA goals. Not all of the possible LEED credits align with DoDEA goals.

See Appendix 4 –DoDEA LEED Guidance – Project Scorecard, which provides specific DoDEA minimum benchmark LEED credits and credits that do not align with DoDEA goals.

6.3. **Commissioning**

The Construction Agent is responsible for obtaining a third party independent commissioning authority (CxA) who will lead, review, and oversee the completion of all commissioning process activities during the design and construction phases. The commissioning process activities must, at a minimum, be completed for the following energy related systems:

- Heating, ventilating, air conditioning and refrigeration (HVAC&R) systems (mechanical and passive) and associated controls
- Lighting and daylighting controls
- Domestic hot water systems
- Renewable energy systems (e.g., wind, solar)
- Building Enclosure
- Energy metering systems

The CxA will have documented commissioning authority experience in at least two schools or higher education building projects and 5 years of experience, be independent from the design and construction PDTs. The CxA will not be an employee of the A/E or construction contractor, and may not be sub-contracted through the A/E or construction contractor. The CxA will report results, findings and recommendations directly to the DoDEA Area Office Project Manager and the construction agent project manager (CAPM).

The DoDEA Area Office PM and CAPM will document the OPR during the 15% Parametric Design phase. The A/E will develop the basis of design. The CxA must review these documents for clarity and completeness. The CxA will be responsible for updates to the OPR. The A/E will be responsible for updates to the basis of design.

The purpose of building enclosure commissioning is complement but not replace other Department of Defense (DoD) and DoDEA commissioning requirements for HVAC and other systems and the requirements for High Performance Building Standards as stipulated in the Project specifications. Compliance with NIBS (National Institutes of Building Sciences) Guideline 3-2012 – Building Enclosure Commissioning Process BECx will serve as the minimum standard. Building Enclosure Commissioning focuses on the testing and verification of the performance of the building enclosure —the skin supported by the skeleton of the structure or the monolithic load-bearing wall —which mediates the environment and provides security. Refer to Appendix 3
for the DoDEA Building Enclosure Commissioning Template that will be utilized by the PDT on all DoDEA MILCON projects.
APPENDICES

The following list of resources shall be used by the Project Delivery Teams to document and execute the DoDEA Sustainability and Energy Efficiency requirements:

1. Owner’s Project Requirements Template
   This template should be populated by the PDT during the 15% Parametric Design.

2. DoDEA LEED Implementation Guide
   This guide provides GBCI submittal and registration instructions to the A/E.

3. Building Shell Commissioning Plan Template
   This template is to be by the Commissioning Agent to develop and manage the building shell commissioning plan.

4. DoDEA LEED Guidance – Project Scorecard
   This scorecard provides DoDEA/UFC benchmark minimum LEED credits, encouraged LEED credits and LEED credits that don’t align with DoDEA goals and should not be pursued.

5. MPR 6 Department of Defense Exemption Process
APPENDIX 1

OWNER’S PROJECT REQUIREMENTS TEMPLATE
1. GENERAL GUIDANCE

This document details the ideas, concepts and criteria that are determined by the owner to be important to the success of this project. It provides the Design Team, Contractor, and Commissioning Authority (CxA) a “road map” for the development of a successful design and enables them to verify the needs have been addressed in the construction documents.

The Owner’s Project Requirements (OPR) is developed in collaboration by the Project Delivery Team (PDT), and provides direction for the project execution. The OPR does not list items that are already required by code. The OPR is not a description of what specifically will be included in the project, but is more general feature and categorical performance criteria to be met by the design.

The OPR shall be created by the PDT for inclusion with the submitted 15% Parametric Design Charrette Report. The OPR will be updated at each major design milestone by the CxA and approved by the DoDEA Area Office PM, the Construction Agent Project Manager (CAPM) and the Installation Project Representative.

2. GENERAL PROJECT DESCRIPTION.

   a. Purpose. This facility is intended to educate [elementary/middle/high] school students. The facility will be approximately [#] square feet in size and is designed to serve a population of [#] students and a staffing compliment of [#] instructors and other staff members. This facility is intended to be a 21st Century Education Facility.

   b. History. This project is a [design/bid/build] delivery project consistent with design standards, specifications and project delivery methods developed and executed for [DoDEA Americas/DoDEA Pacific/DoDEA Europe]. The Department of Defense Education Activity (DoDEA) Design Center is the subject matter expert for the owner. The [USACE] [NAVFAC] [Region] District is the construction agent for the owner.

   c. Program. The [elementary/middle/high] school shall be designed to accommodate students from [lowest level] level through [highest level]. DoDEA Education Facilities Specifications (EdSpecs) form the basis for planning and construction for the Department of Defense school facilities and are applicable to this project.

   d. Facility Schedule.  
      (1) Typical school week hours of operation (M-F):  
      (2) Typical weekend hours of operation:  
      (3) After school activities and special events days and hours:
(4) Other occupancy schedules.
   (a) Summer Schedule:
   (b) Holidays:
   (c) Other periods of non-normal occupancy:

e. Site Location and Condition.
   (1) Base location and climate considerations:
   (2) Site Condition
      (a) Former site usage/structures:
      (b) Infrastructure (Electric, Water, Storm Water, Sewer and Gas):
      (c) Access (Streets, Roadways, etc):

f. Restrictions and Limitations. There are several restrictions and limitations that are fixed for this project due to its location and the requirements of the Owner. These restrictions and limitations are detailed below and become part of the Basis of Design created by the design professionals.

   (1) Installation restrictions: [Installation Master Plan] [Installation Design Guide]
   (2) AT/FP - Category [I] [II] explosive; [#] standoff distance; Low level of Protection
   (3) Utility Issues:
   (4) Easements, Right of Ways:
   (5) Seismic Requirements:
   (6) Access Limitation:
   (7) Height Restrictions:
   (8) Noise Restrictions:
   (9) Water Pressure Limitations:
   (10) Other Restrictions and Limitations:

3. OWNER/USER PROJECT REQUIREMENTS

   a. This project shall achieve a Silver rating in accordance with US Green Building Council’s (USGBC) LEED for Schools® rating system.

   b. Owner Directives – The following are specific requests:

      (1) [site, layout, etc.]
      (2) Use the building as a learning tool through the implementation of [rainwater harvesting] [solar photovoltaic] [signage] [ ].
c. Community Requirements – School to be designed for afterhours access to [gymnasium, commons and stage area]. [Neighborhood areas to be closed after hours.]

d. Adaptability/Expansion – School should be designed with flexibility in mind. Considerations include: demountable, movable wall systems, modular furnishings, in-floor wiring, wireless connectivity, non-load bearing wall systems, raceways, cable trays and large generic space that can be adapted.

e. Safety and Security – Designs are required to follow the requirements in the DoDEA Office of Safety and Security Project Design Criteria, Technical Requirements and Prescriptive Specifications.

f. Aesthetics – Installation Master Plan considerations as well as applicable design guidelines.

g. Access to Technology and Informational Resources – [Areas will have telephone and voice communications in every classroom and workspace, video distribution in every learning studio and throughout the building, and data retrieval capabilities in every classroom and throughout the building as well as network capabilities to other external resources.]

h. Access to Equipment – [Stairs shall be used (not vertical ladders) for access to major equipment. All gauges shall be clearly visible from floor level and all test ports, shut-off valves and items required for maintenance shall be accessible by a 6’, 250 pound person.]

i. Specialty Areas

3. 21st Century School Environments and Sustainability Goals

a. Improve the Learning Environment

(1) Lighting for Improved Learning

   Goal - Improve the learning and teaching performance through effective lighting design and use of natural daylight. The use of task lighting that is adjustable and directional can assist in removing glare from non-moveable lighting or outdoors.

(2) Acoustics for Improved Learning

   Goal – Prevent poor acoustics from impacting the students’ ability to learn and the teachers’ ability to teach. Avoid distraction of noise from adjacent
areas/outdoors and from equipment in or above/below the space. An acoustician will be required.

(3) Air Quality for Improved Learning

Goal – Reduce absenteeism by having a high quality air system. The HVAC system shall meet the latest version of ASHRAE Standard 62.1. CO2 monitors shall be employed in all high occupancy locations and consider connected them to a demand controlled ventilation system. Include outside air flow monitoring on all ventilation systems.

(4) Thermal Comfort for Improved Learning

Goal – Provide consistent air temperature and relative humidity within each space for a comfortable learning environment so students and teachers can reach their full potential. The HVAC system shall meet the latest version of ASHRAE Standard 55.

b. Improve Facility Efficiency

(1) Optimize Energy Performance

Goal – Reduce energy consumption to the highest level possible that is economically viable without compromising the learning environment. At a minimum, meet or exceed the criteria established by ASHRAE 90.1 - 2010.

(2) Conserve Water

Goal – Reduce water consumption to the highest level possible that is economically viable without compromising the learning environment by building to the specific site and integrating site conditions to the building layout and systems and using low water fixtures.

(3) Building Envelope

Goal – Design an envelope (roofing, façade, fenestration) that meets or exceeds the Owner criteria for, but not limited to: rain penetration, envelope air leakage, glazing or tinting, daylighting, solar orientation, internal usage, roof shape and materials, equipment support and locations, durability costs, future expansion adaptability, maintenance required and any other considerations for the overall building envelope.

c. Reduce the Environmental Impact of Materials
(1) School Recycling Program

Goal – Divert recyclable materials from the landfill and teach students the importance of resource conservation and environmental stewardship.

(2) Construction Recycling Program

Goal – Divert a minimum of 50% construction debris from the waste stream through recycling and salvage.

(3) Responsible Selection of Materials

Goal – Use sustainably responsible material in the construction of facilities.

(4) Reduce Ozone Depletion

Goal – Zero use of CFC based refrigerants

d. Monitor Results

(1) Commissioning

Goal – Verify the building systems are installed, calibrated and perform as intended.

(2) Metering

Goal – Provide accurate consumption data for all utilities in a user friendly format.

(3) Survey Users

Goal – Obtain input from building uses in order to provide and maintain superior facilities for students and teachers.

4. SYSTEMS CRITERIA

a. Building and Systems Life Cycle Requirements - The school shall have a 25 year useful design life before a possible re-use/re-purpose or renovation requirement, to include normal sustainment, restoration, modernization activities and a 45 year building replacement life. The design and construction shall provide an appropriate level of quality to ensure continued use of the facility over that time period with the application
of reasonable preventative maintenance and repairs that would be industry-acceptable to major civilian sector schools.

b. Site Infrastructure Life Cycle Requirements – The site infrastructure will have at least a 45 year life expectancy with industry-accepted maintenance and repair cycles.

c. Equipment – Energy Star or FEMP designated products shall be required where applicable. "Energy Star product": a product that is rated for energy efficiency under an Energy Star program. The term "FEMP designated product" means a product that is designated under the Federal Energy Management Program of the Department of Energy as being among the highest 25 percent of equivalent products for energy efficiency. All motors shall be NEMA premium efficiency motors.

d. Maintainability Expectations – Access to building areas, systems and facilities are unencumbered allowing for future maintenance and repairs. The Operations and Maintenance staff will be trained by installers and/or manufacturer’s representatives prior to occupation for all systems and accompanied by electronic O&M manual. Training and questions asked by staff will be recorded by video for future reference and training of new staff.

e. System Integration – [Project Name] shall use a Building Automation System (BAS) for HVAC control. Consider including lighting controls and the AT/FP emergency ventilation shut down. The BAS must be compatible with DoDEA Peachtree City central monitoring and control system [and the base-wide Energy Management System].

5. OWNER’S PROJECT REQUIREMENTS VERSION HISTORY

The changes made to this OPR document throughout the Pre-Design, Design, Construction, and Occupancy and Operations Phases are summarized in the following table. Tracking of this information is critical in that it enables future operators and design professionals an understanding of the trade-offs made during the project and the resulting impact on the facility and achievement of the OPR.

For example:

<table>
<thead>
<tr>
<th>Change #</th>
<th>Original OPR</th>
<th>New OPR</th>
<th>Reason for Change</th>
<th>Approved By</th>
<th>Date Approved</th>
</tr>
</thead>
</table>


<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>New Description</th>
<th>Action</th>
<th>Approver</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Items under “Systems Criteria” were the same as that under “Performance Criteria – Systems – Energy Efficiency”</td>
<td>“Performance Criteria – Systems – Energy Efficiency” was changed to “there are no special concerns relative to the HVAC systems”</td>
<td>Remove redundancy</td>
<td>Bill Bale (owner)</td>
<td>8/5/13</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX 2

DODEA LEED IMPLEMENTATION GUIDE
DODEA LEED IMPLEMENTATION GUIDE

General Guidance – The following is an outline of procedures to aid in the implementation of LEED for DoDEA projects. It is not a complete list of all steps required to achieve certification. Certification requires an integrated design and construction approach with an emphasis on communication between stakeholders and documentation of LEED and project requirements. LEED is used as a third party verification tool to track DoDEA’s achievement of goals and objectives.

Although they are similar to LEED, federal and DoD sustainable design mandates are separate standalone requirements. Meeting the LEED requirements does not in itself constitute compliance with federal and DoD sustainable design mandates. The A/E and construction contractor shall first address compliance with these separate standalone federal and DoD requirements and then select LEED credits that contribute to compliance.

Implementation

a) DD Form 1391 Criteria to be Developed
   Establish the overall project sustainability and performance goals and address budget impacts.

b) Parametric 15% Design Charrette Report
   (1) OPR – Review and incorporate the OPR developed for the DD Form 1391. Refine the OPR as necessary with formal endorsement from the Installation, the DoDEA Design Center, SEEPM, and the Area Office PM.
   (2) LEED Project Checklist - refine and/or validate the target sustainability credit goals for the project as identified in the DD Form 1391 and update the LEED Project Checklist accordingly.
   (3) The CAPM will coordinate formal endorsement and filing of the endorsed LEED Project Checklist and OPR. The updated LEED Project Checklist will be endorsed by the Installation, the DoDEA Design Center, the SEEPM, the User and the Area Office PM.

c) RFP Development (if required)
   (1) Update and include completed OPR document and LEED Project Checklist.
   (2) Indicate post-award LEED submittal and documentation requirements. Include and require compliance with the applicable LEED for Schools Submittals document. Include monthly updates to the LEED documents.
   (3) Require the A/E and construction contractor to provide a LEED AP assigned to the project through closeout.
(4) Require a Technical proposal that includes the LEED Project Checklist indicating proposed credits to be claimed with a narrative describing how each credit will be achieved.

(5) The CAPM will coordinate formal endorsement and filing of the endorsed LEED Project Checklist and OPR. The LEED Project Checklist representing the project current rating resulting from the conformed proposal will be endorsed by the Installation, the DoDEA Design Center, the SEEPM, the A/E, and the Area Office PM.

d) Registration Procedure

Project registration shall occur no later than the 35% concept design by the A/E. Projects should be registered before design commences so that the templates are available to the design team from the start of design. The intent of the following guidance is to standardize the LEED registration and tracking of all DoDEA MILCON projects using the US Green Building Council (USGBC) / Green Building Certification Institute's (GBCI) LEED Online system. This guide and the referenced documents provide the information required to complete the LEED registration process, invite initial Team Members, and complete necessary forms and agreements. It is designed to provide consistent project registration information and is intended for use by an A/E that has an active USGBC/GBCI account, is familiar with the LEED Online website and has a general understanding of the LEED registration process.

Pre-Registration Information

1) Registration Schedule
   a) Project should be registered before design commences so that the templates are available to the design team from the start of design.
   b) Project registration should occur within 30 days of Notice to Proceed with 35% design.

2) Project registration shall be performed by the A/E via LEED Online. A/E will be the LEED Project Administrator, unless otherwise directed.

3) Completed DD Form 1391 for the project.
New Project Registration

1) Eligibility
   a) Welcome screen; click "Next"
   b) A/E shall review all "Personal Information" for their account, verify that is complete and accurate, and update if required. Then click "Next"

2) Rating System Selection
   a) Select "This is a single building/space/development registration..."; then click "Next"
   b) Select "LEED 2009 for Schools New Construction and Major Renovations"; then click "Next"
   c) Will this LEED project meet the Minimum Program Requirements...?
      i) If the project will meet the Minimum Program Requirements by the time the project application is submitted for certification, select "Yes", and then click "Next".
      ii) If the project does not or will not meet the Minimum Program Requirements before the project application is submitted for certification, the project registration process cannot be completed. Contact the Sustainability and Energy Efficiency Program Manager (SEEPM) to resolve any outstanding issues.
      iii) Click "[Read More]" to view the LEED Minimum Program Requirements.

3) Rating System Results
   a) This screen shows the selected Rating System and Scorecard; click "Next" to continue

4) Project Information
   a) Review the LEED Project Registration Agreement and accept if you agree; then click "Next"
   b) Project title – Input project name starting with “DoDEA ” followed by an abbreviated name using information from section "4. Project Title" of the DD Form 1391. Total character limit is 40.
   c) Address 1 and Address 2 - Input information that best describes the location of the new building on the installation. Example are "on north/south/east west side of street name between street name and street name"; or "on north/south/east west corner of street name and street name intersection". Character limit is 60 per line.
   d) City – Input the name of the installation. Spell out “Fort” if applicable.
e) **County** – Input name of the County

f) **State / Province** – Select from drop down menu

g) **Country** – Select from drop down menu

h) **Zip / Postal Code**
   i) U.S. projects – Input five digit zip code.
   ii) International projects with a zip code – Input zip code in the format defined for the country.
   iii) For project locations without a zip code – Input "00000".

i) **School District** – Input one of the following:
   i) DoDEA Americas
   ii) DoDEA Europe
   iii) DoDEA Pacific

j) **Anticipated Construction Dates** – Use the dates shown in section “12. Supplemental Data” of the DD Form 1391.
   i) **Construction Start Date** – Select date from pop-up calendar.
   ii) **Construction End Date** – Select date from pop-up calendar.

k) **Gross square footage / Gross floor area** – Input total area (square feet) of the building to be certified from DD Form 1391. This may need to be updated as the design progresses.

l) **Is project confidential?** Select "No", unless otherwise directed.

m) **Would you like to notify your local (USGBC) chapter?** Select "No"

n) **Anticipated project type** – Select appropriate type from the pull-down menu
   i) "Core Learning Space: K-12, Elementary / Middle School" or
   ii) "Core Learning Space: K-12, High School"

o) **Anticipated certification level** – Select "Silver" from the pull-down menu

p) **Project Owner Information**
   i) **Organization** – Input "DoDEA"
   ii) **Publish project owner information?** Select "Yes"
   iii) **Owner type** – Select "Government Use: Federal" from pull-down menu
   iv) **Website** – Leave blank
   v) **Main Office** – Leave blank unless otherwise directed.
(vi) Country may default to USA, if so select blank from pull-down menu to remove it.

vii) Primary Owner Contact
    (1) Shall be the DoDEA Sustainability and Energy Efficiency Program Manager (SEPM).

viii) Check the terms and conditions box indicating that the primary contact or a designated Agent for this project will execute the LEED Certification Agreement.
    (1) If the A/E is to be the designated Agent for DoDEA, the A/E will coordinate with the SEPM to review, understand and complete the current GBCI Confirmation of Agent’s Authority form. This can be accomplished either before or after project registration.

5) Review – Review all entered project information and revise if necessary. Confirm when all required information is complete and accurate. Clicking on “Confirm” will register the project and take you to the payment screen.

After the Project is Registered in LEED Online

1) A/E shall obtain a list of Owner Project Team Members that need to have access to LEED Online and invite them to join the project.

USGBC/GBCI LEED Reference Documents

1) Minimum Program Requirements – This document identifies minimum characteristics that a project must possess in order to be eligible for LEED Certification.
   
   **NOTE:** USGBC has granted DOD a blanket exemption from Minimum Program Requirements (MPR) 6 (Must Commit to Sharing Whole-Building Energy and Water Usage Data). See attached Exemption Process.

   DoDEA will voluntarily share data through Energy Star’s Portfolio Manager Tool yet still request exemption from MPR 6.

2) LEED Project Registration Agreement – The terms and conditions of this agreement include the LEED Certification Policy Manual, the LEED Rating System, and the LEED Minimum Program Requirements. This agreement must be accepted to register a project under the LEED certification program.

3) LEED Certification Agreement – The purpose of this Agreement is to ensure that the owner of the project has reviewed all aspects of the LEED certification application
for completeness, truth and accuracy, and is fully aware of and agrees to all of the following terms and conditions.

4) Confirmation of Agent’s Authority – In lieu of the primary owner contact signing the LEED Certification Agreement, the primary owner contact may sign the Confirmation of Agent’s Authority form to designate another user to sign the LEED Certification Agreement.
APPENDIX 3

Building Enclosure Commissioning Plan Template
Project Name
Installation
Contract #

COMMISSIONING PLAN TEMPLATE
BUILDING ENCLOSURE
COMMISSIONING

Model Template

Date

Prepared by:
[Organization]
# Table of Contents

1.0 Overview ......................................................................................................................................... 32

1.1 Introduction ....................................................................................................................................... 32

1.2 Purpose and Scope .......................................................................................................................... 32

1.3 Commissioning Process Overview .............................................................................................. 34

1.4 Forms ........................................................................................................................................... 35

2.0 Project and Contact Information ..................................................................................................... 35

2.1 General Information ....................................................................................................................... 35

2.2 Commissioning Team Members ................................................................................................. 35

3.0 Commissioning Team Roles and Responsibilities .......................................................................... 37

3.1 Government Team – Installation Representative (Owner) ............................................................ 37

3.2 Design Team – Architecture and Engineering Discipline Leads .................................................. 37

3.3 General Contractor Team – Quality Control Representatives .................................................... 38

3.4 General Contractor Team – Commissioning Agent .................................................................... 38

4.0 Commissioning Team Roles and Responsibilities .......................................................................... 39

4.1 Key Commissioning Authority Deliverables ............................................................................ 39

4.2 Commissioning Report .................................................................................................................. 39
1.0 Overview

1.1 Introduction

The following document represents the Building Enclosure Commissioning Plan for the [Project Name] at [Installation]. It is designed to complement but not replace DoDEA’s distinct Commissioning Policy or other Department of Defense (DoD) commissioning requirements for HVAC and other systems and the requirements for High Performance Building Standards as stipulated in the project specifications. Compliance with NIBS Guideline 3-2012 will serve as the minimum standard. This Building Enclosure Commissioning Plan activity shall be performed by the Commissioning Authority (CxA) along with the standard Building Commissioning Plan which focuses on the testing, measurement, verification, and ongoing optimal operational requirements of the building’s mechanical, electrical, and plumbing systems. Building Enclosure Commissioning focuses on the testing and verification of the performance of the building enclosure –the skin supported by the skeleton of the structure or the monolithic load-bearing wall—which mediates the environment and provides security. The materials and assemblies related to the building enclosure are identified in Section 1.2 below. These materials are manufactured by companies with a specific function and then assembled into a singular system. Due to the assembled nature of these systems, the overall performance of the system cannot be determined until substantial completion of the project has occurred at a point when the building enclosure is completely enclosed.

For this project, [enter name of commissioning agent/authority] will be contractually independent of [enter name of building contractor] (General Contractor) and reports to the PDT. General Contractor shall cooperate with Commissioning Agent/Authority in performance of commissioning services and activities for this project. The enclosure commissioning team members’ responsibilities are detailed in the project specifications. Enclosure Commissioning (Cx) is a systematic process of ensuring that building exterior enclosure systems are designed, installed and perform in accordance with the Owner’s Project Requirements (OPR) and the Basis of Design (BOD) documents, design plans and specifications.

1.2 Purpose and Scope

The Building Enclosure Commissioning Plan outlines the commissioning scope, commissioning roles and responsibilities, commissioning team members, acceptance/verification procedures, and documentation required. The Building Enclosure Commissioning Plan is intended to be a working document and is to be updated as design and construction progresses.

The Building Enclosure Commissioning Plan does not provide a detailed explanation of required testing procedures. The initial concepts and requirements should be composed in the Pre-Design phase to set a preliminary scope and set the commissioning budgets for the various types and phases of commissioning for the project. The detailed testing requirements and procedures are found in the project Specifications related to High Performance Building Standards, ASHRAE Guideline 1.1, NIBS Guideline 3-2012 and ASHRAE Guideline 0 depending on language from the OPR and BOD.

Building Enclosure Commissioning is a systematic process of ensuring that the building enclosure components (the drainage plane, air and thermal barriers, and vapor profile) and systems perform interactively according to the design intent and project specifications. This is achieved initially in the pre-
design phase, documenting the design intent and continuing through construction, acceptance and the warranty period with actual verification of performance.

The Building Enclosure Commissioning of the project is achieved by developing and implementing the specific process for this project with respect to the activities and requirements outlined in the Project’s Plans, Specifications, and NIBS Guideline 3-2012. To define the Building Enclosure Commissioning process, the Commissioning Team develops a Building Enclosure Commissioning plan to provide direction for tasks during the design and construction and for additional testing requirements. The plan focuses on providing support to the specifications and provides forms for the application of the commissioning process.

Building Enclosure Commissioning of this Project is intended to achieve the following:

- Verify commissioning requirements for each specific system are incorporated in the construction documents with an emphasis on rain penetration control, durability, constructability, maintainability, and sustainability.
- Verify the design intent is met and the level of water and air tightness of the exterior enclosure is as specified in the OPR.
- Verify that applicable components and systems are installed properly in accordance with BOD and OPR design documents.
- Integrate various sub-systems and major systems that are dependent on each other.
- Verify that applicable components and systems receive adequate checkout by installing Contractors.
- Verify and document proper performance of components and systems such as: Exterior walls (above and below grade), Slab, Roofing, Trim, Louvers, Curtain Walls, Sealants, Control Joints, Flashing, Interior Shading Devices, Doors and Window systems.
- Verify manufactures’ and contractor’s warranties meet requirements as outlined in the specification and contracts documentation.
- Ensure that all as-built documentation is complete and accurate.
- Verify that O&M documentation left on site is complete.
- Verify that the Government’s operating personnel are adequately trained.

The benefits of Building Enclosure Commissioning include: improved building documentation, improved coordination of envelope components, enhanced resistance to water infiltration, improved maintainability, improved indoor environmental quality, reduced energy use, reduced contractor call back/punch list items and verification that the systems perform in accordance with the OPR.
1.3 Commissioning Process Overview

The Building Enclosure Commissioning of the Project will entail the following activities:

Design Phase Commissioning Activities:

- Identify the Scope and budget for the commissioning processes, which shall be finalized during the Parametric Design Phase.
- Document the Owner’s Project Requirements (OPR), which shall be finalized during the Parametric Design Phase.
- Schedule Building Enclosure Commissioning Kick-Off Meeting to identify all team members and their responsibilities
- Document Basis of Design (BOD)
- Verify BOD Compliance with OPR
- Building Enclosure Commissioning Plan Development
- Design Plan and Construction Development

Construction Phase Building Enclosure Commissioning Activities:

- Functional Installation Verification (FIV) Sheet Development and Completion by Contractors
- Submittals Review to validate that the performance parameters for each exterior enclosure system meet the OPR
- Functional Performance Testing (FPT) Development. Air barrier testing is a minimum, additional testing could include: infrared scanning of the constructed building to identify thermal leakage, water infiltration testing to identify leakage and prevent heat, air, moisture and mold issues, and any additional testing as identified per specific building envelope systems.
- On-Site Progress Observations, especially during roof transition/roof termination installations, initial installations of sealants and the specific project interfacing conditions (below grade waterproofing, differing material interfaces and fenestration expansion joints, etc.).
- Identification of Issues, Updating and Resolution
- Field Testing and Component Verification
- Training Review and Observations

Turnover Phase Commissioning Activities:

- O&M Manuals Review/Organize.
• Development of a systems manual for each major building exterior enclosure system, including but not limited to: roof, exterior walls, windows, doors, sealants, expansion joints, control joints and flashings

• Project Warranty Letter Review

• Final Commissioning Report
  • Submittals and Data Sheets
  • Specifications
  • Commissioning and Project Testing Reports

1.4 Forms
Forms will be developed by the CxA team in accordance with the design and construction schedule. Forms will be reviewed by all members of the commissioning team for their input/comments, prior to implementation. As forms are developed and approved, they will be added to an appendix of the commissioning plan. Examples of commissioning forms to be included in an appendix include the following:

• Site Inspection Forms- CxA team will conduct site inspections dictated by construction schedule for verification by CxA team that systems are installed in accordance with plans, specifications, manufacturers requirements and shop drawings. Functional Installation Verification Forms

• Functional Performance Testing Forms

• Specialized Test Verification Forms- CxA team will document tests required by the specifications and conducted by the responsible contractor. For example, air barrier pressure test.

2.0 Project and Contact Information

2.1 General Information
Project Name: [enter the Project Name]
Project Number: [enter the Project Number (must correspond with 1391)]
Location: [enter the Location]
Building Type: [enter the Building Type]
Occupancy: [enter the name of tenant organization occupying the facility]
Construction Period: [enter the construction award date and completion date]
Commissioning Plan: [enter date of the current/final commissioning plan document]

2.2 Commissioning Team Members
Table 1: Commissioning Team Roster – Owner and Design Team Representatives, contains the listing of team members and contact information for this Project representing the interests of the owner and designer.
Table 2: Commissioning Team Roster –Builder’s Team Representatives contains the listing of team members and contact information for this Project representing the interests of the builder’s team along with the Commissioning Authority.

### Table 1: Commissioning Team Roster – Owner and Design Team Representatives

<table>
<thead>
<tr>
<th>Team Member</th>
<th>Organization and Contact Name</th>
<th>Phone Number and E-Mail Address</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Government Team</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Manager</td>
<td>[enter name of organization]</td>
<td>[enter phone number]</td>
</tr>
<tr>
<td></td>
<td>[enter name of POC]</td>
<td>[enter e-mail address]</td>
</tr>
<tr>
<td>Area Construction Engineer</td>
<td>[enter name of organization]</td>
<td>[enter phone number]</td>
</tr>
<tr>
<td></td>
<td>[enter name of POC]</td>
<td>[enter e-mail address]</td>
</tr>
<tr>
<td>DoDEA Facilities Manager</td>
<td>[enter name of organization]</td>
<td>[enter phone number]</td>
</tr>
<tr>
<td>Representative</td>
<td>[enter name of POC]</td>
<td>[enter e-mail address]</td>
</tr>
<tr>
<td>Tenant Representative</td>
<td>[enter name or unit]</td>
<td>[enter phone number]</td>
</tr>
<tr>
<td></td>
<td>[enter name of POC]</td>
<td>[enter e-mail address]</td>
</tr>
<tr>
<td>Contracting Officer</td>
<td>[enter name or unit]</td>
<td>[enter phone number]</td>
</tr>
<tr>
<td></td>
<td>[enter name of POC]</td>
<td>[enter e-mail address]</td>
</tr>
<tr>
<td><strong>Design Team</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Manager</td>
<td>[enter name of organization]</td>
<td>[enter phone number]</td>
</tr>
<tr>
<td></td>
<td>[enter name of POC]</td>
<td>[enter e-mail address]</td>
</tr>
<tr>
<td>Architect/Design Team Lead</td>
<td>[enter name of organization]</td>
<td>[enter phone number]</td>
</tr>
<tr>
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<td>[enter e-mail address]</td>
</tr>
<tr>
<td>Structural Eng/Design Team Lead</td>
<td>[enter name of organization]</td>
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</tr>
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<td>[enter e-mail address]</td>
</tr>
<tr>
<td>LEED Accredited Professional</td>
<td>[enter name of company]</td>
<td>[enter phone number]</td>
</tr>
<tr>
<td></td>
<td>[enter name of POC]</td>
<td>[enter e-mail address]</td>
</tr>
</tbody>
</table>

### Table 2: Commissioning Team Roster –Builder’s Team Representatives

<table>
<thead>
<tr>
<th>Team Member</th>
<th>Organization and Contact Name</th>
<th>Phone Number and E-Mail Address</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Contractor Team</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Manager</td>
<td>[enter name of company]</td>
<td>[enter phone number]</td>
</tr>
<tr>
<td></td>
<td>[enter name of POC]</td>
<td>[enter e-mail address]</td>
</tr>
<tr>
<td>Site Supervisor</td>
<td>[enter name of company]</td>
<td>[enter phone number]</td>
</tr>
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<td>[enter e-mail address]</td>
</tr>
<tr>
<td>Quality Control Supervisor</td>
<td>[enter name of company]</td>
<td>[enter phone number]</td>
</tr>
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<td>[enter e-mail address]</td>
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</tr>
<tr>
<td></td>
<td>[enter name of POC]</td>
<td>[enter e-mail address]</td>
</tr>
</tbody>
</table>
3.0 Commissioning Team Roles and Responsibilities

Commissioning Team Roles and Responsibilities follows Table 1 and presents an overview summary of roles and responsibilities of those team members with direct responsibility for commissioning activities.

3.1 Government Team – DoDEA Representative

1) The PDT shall create and maintain the Owner’s Project Requirements document.

2) Assign maintenance personnel and schedule them to participate in meetings, training sessions and inspections as follows:

   a) Maintenance orientation and inspection.

   b) Owner’s training session. Training sessions for operation and maintenance (O&M) of commissioned systems shall be attended by DoDEA Facilities Manager and Installation Support representatives.

   c) Final review at acceptance meeting.

3) Provide utilities required for the commissioning process.

4) Participate in all commissioning meetings

5) Participate in the 10-month warranty walkthrough with CxA and General Contractor Representative.

3.2 Design Team – Architecture and Engineering Discipline Leads

1) Provide clarification and interpretation of the construction documents as it relates to the building enclosure.

2) Provide shop drawing review to determine conformity with the requirements and intent.

3) Review the developed testing documentation to ensure compliance with the design requirements.

4) Advise on changes to construction contract and design intent that may impact on the building shell

5) Provide analysis of test results in terms of compliance and non-compliance to contract requirements.

6) Participate in commissioning meetings.

7) Review as-built records as required by contract documentation and turn them over to appropriate representatives of the contracting team.
8) Review and comment on the final commissioning report.

9) Participate in the 10-month warranty walkthrough with CxA and Owners Representative.

### 3.3 General Contractor Team – Quality Control Representatives

1) Function as a catalyst and initiator to disseminate information and assist the design and construction teams in the completion of the construction process. This shall include construction observation, spot testing, verification and functional performance testing, and provide information to the responsible parties, e.g. contractors, design professionals, and the Owner

2) Review the design documents for their effect on the commissioning process and the final performance of the commissioned systems.

3) Be responsible for coordinating all of the efforts and be responsible for seeing that all appropriate actions are taken to have the work performed in accordance with the commissioning plan.

4) Participate in all commissioning meetings.

5) Participate in the 10-month warranty walkthrough with CxA and Owners Representative.

### 3.4 Commissioning Agent/Authority

1) Assist in the creation of the Owner’s Project Requirements document and Building Shell Commissioning specifications

2) To oversee activities defined in the commissioning plan, thereby ensuring implementation of the overall quality control process.

3) Review all submittals (e.g. equipment ductwork, piping, automatic controls and TAB procedures for their effect on the commissioning process and the final performance of the commissioned systems.

4) Develop project specific component/field verification sheets.

5) Periodic construction monitoring (roof transition/termination, initial sealant installs, below grade waterproofing, differing material interfaces, fenestration expansion joints and etc.)

6) Develop project specific performance verification tests.

7) Submit verification test data for review to the Commissioning Authority for review and acceptance.

8) Participate in the 10-month warranty walkthrough with General Contractor Representative and Owners Representative.
4.0 Commissioning Team Roles and Responsibilities

4.1 Key Commissioning Authority Deliverables
1) Review of BOD and OPR
2) Review of design documents and report.
3) Develop and update Commissioning Plan.
4) Develop a Commissioning Specification.
5) Develop building shell checklist forms.

4.2 Commissioning Report
A final Commissioning report by CxA team will be provided to Government. The report shall include the following sections:

1) Executive summary
2) Evaluation of the operating condition of the facility emphasizing
   a) Constructability
   b) Maintainability
   c) Durability
   d) Sustainability
   e) Rain Penetration Control
3) Deficiencies that were discovered and the measures taken to correct them
4) Uncorrected deficiencies that were accepted by the owner
5) Test sheets
6) Reports that documented all field commissioning activities as they progress.
7) Approved As-built drawings
8) Operations and Maintenance manuals
APPENDIX 4

DoDEA LEED Guidance – Project Scorecard
## DoDEA LEED GUIDANCE

### PROJECT SCORECARD

**LEED 2009 for Schools New Construction and Major Renovation**

<table>
<thead>
<tr>
<th>Sustainable Sites</th>
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<tr>
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<td>Site Selection</td>
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<td>Development Density and Community Connectivity [4 pts]</td>
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<td>Brownfield Redevelopment</td>
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<td>Alternative Transportation-Bicycle Storage and Changing Rooms</td>
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<td>Alternative Transportation-Bicycle Access [4 pts]</td>
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<td>Alternative Transportation-Low-Emitting and Fuel-Efficient Vehicles [2 pts]</td>
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<td>Alternative Transportation-Parking Capacity [2 pts]</td>
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<td>Site Development-Protect or Restore Habitat</td>
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<td>Site Development-Maximize Open Space</td>
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<td>Stormwater Design-Quality Control</td>
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<td>Heat Island Effect - Roof</td>
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<td>Credit 8</td>
<td>Light Pollution Reduction</td>
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<td>Credit 9</td>
<td>Site Master Plan</td>
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**SS subtotal**

11 8 5

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<td>Water Efficient Landscaping - Reduce by 50% [2 pts]</td>
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<td>Water Efficient Landscaping-No Potable Water Use or Irrigation [2 pts]</td>
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<td>Innovative Wastewater Technologies</td>
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<td>Process Water Use Reduction</td>
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**WE subtotal**

4 6 1

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<td>Fundamental Commissioning of Building Energy Systems</td>
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<td>Prereq 3</td>
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<td>Optimize Energy Performance [19 pts]</td>
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<td>On-Site Renewable Energy [7 pts]</td>
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<td>Credit 5</td>
<td>Measurement and Verification [during one year post occupancy]</td>
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**EA subtotal**

15 16 2
### Materials and Resources

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<td>Storage and Collection of Recyclables</td>
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<td>Building Reuse - Maintain 75% or 95% of Walls, Floors, and Roof</td>
<td>1-200-02 Ch 3-7.4</td>
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<td>Building Reuse - Maintain 50% of Interior Non-Structural Elements</td>
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<td>Construction Waste Management - Divert 50% or 75%</td>
<td>1-200-02 Ch 4-7.4 (50% minimum)</td>
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<td>Materials Reuse, 5% or 10%</td>
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<td>Recycled Content - 10% or 20% (post-consum + 1/2 per-consum)</td>
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<td>Regional Materials - 10% or 20% Extracted, Processed &amp; Mfg</td>
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<td>Rapidly Renewable Materials</td>
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<td>Certified Wood</td>
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**MR subtotal**

|   | 1 | 12 | 0 |

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<td>Minimum Indoor Air Quality Performance</td>
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<td>Environmental Tobacco Smoke (ETS) Control</td>
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<td>Minimum Acoustical Performance</td>
<td>45 STC is DoDEA minimum benchmark to support 21C schools</td>
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<td>Outdoor Air Delivery Monitoring</td>
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<td>Increased Ventilation</td>
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<td>Construction IAQ Management Plan - During Construction</td>
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<td>Low-Emitting Materials - Paints &amp; Coatings</td>
<td>1-200-02 Ch 4-6.4</td>
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<td>** only 4 pts allowed for credit 4</td>
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<td>Indoor Chemical and Pollutant Source Control</td>
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<td>Controllability of Systems - Lighting</td>
<td>** MUST MEET UFC 1-200-02 Ch 4-6.3 Req'd 50%</td>
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<td>Controllability of Systems - Thermal Comfort</td>
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<td>Daylight &amp; Views - Daylight 75%</td>
<td>75% is DoDEA minimum benchmark to support 21C schools</td>
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<td>Daylight and Views - Views - 90% of spaces</td>
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**IEQ subtotal**

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### Innovation and Design Process

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<td>Innovation in Design: Provide Specific Title</td>
<td>DoDEA support of Green Cleaning will be by case by case basis</td>
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<td>LEED Accredited Professional</td>
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<td>The School as a Teaching Tool</td>
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**ID subtotal**

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### Regional Priority Credits

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<td>Region Specific Environmental Priority: Region Defined</td>
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**RP subtotal**

|   | 0 | 4 | 0 |

| Total Possible Points | 110 |

**Y | E | N | Total**

LEED Silver 50-59
APPENDIX 5

MPR 6 Department of Defense Exemption Process
MPR 6 Department of Defense Exemption Process

Effective July 25, 2011, the U.S. Green Building Council has granted to the U.S. Department of Defense a blanket exemption from Minimum Program Requirement (MPR) 6 (Must Commit to Sharing Whole-Building Energy and Water Usage Data) for projects registered under LEED 2009. This exemption is retro-active for projects registered and certified under LEED 2009 prior to July 25, 2011. The exemption relieves any project owned by the DOD from the expectation that they provide energy and water data post-certification, and alleviates related concerns about national security. However, USGBC will accept such data from any project that wishes to provide it.

1) Department of Defense distributes exemption language to project managers
   a. Alternative: Project Administrators request the exemption language from GBCI

2) Project Information (PI) Form 1 (Minimum Program Requirements) in LEED Online
   a. Do NOT check the box next to “6. Must Commit to Sharing Whole-Building Energy and Water Usage Data” and do NOT complete any other information under this section.
   b. Do NOT check the box under “Additional Details” next to “The project team is claiming an exemption from Minimum Program Requirement 6: Must Commit to Sharing Whole-Building Energy and Water Usage Data.”
   c. DO check the box next to “Special circumstances preclude compliance with the Minimum Program Requirements as outlined in this form.”
   d. In the following paragraph, fill in the brackets 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:
      i. This is a project under DOD ownership and is taking advantage of the exemption from MPR 6 that USGBC granted to the U.S. Department of Defense as of July 25, 2011.
         Project Name: []
         Project Address, City and State: []
         DOD support agency or military department: []
         Base or Installation name: []
   e. There will be an “N” in the box under “Summary” next to “PI Form 1: Minimum Program Requirements Completed. It is acceptable to submit the form like this.

USGBC – MINIMUM PROGRAM REQUIREMENTS – EXEMPTION FORMS, MPR 6