
USACE / NAVFAC / AFCEC /NASA UFGS-01 33 29 (February 2015)
Change 1 - 11/15

Preparing Activity: NAVFAC Superseding
UFGS-01 33 29 November 2014

UNIFIED FACILITIES GUIDE SPECIFICATIONS

References are in agreement with UMRL dated July 2016

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SECTION 01 33 29

SUSTAINABILITY REPORTING 02/15

NOTE: This guide specification covers the requirements for providing sustainability documentation for Guiding Principles Validation (GPV), and Third Party Certification (TPC).

Adhere to UFC 1-300-02 Unified Facilities Guide Specifications (UFGS) Format Standard when editing this guide specification or preparing new project specification sections. Edit this guide specification for project specific requirements by adding, deleting, or revising text. For bracketed items, choose applicable items(s) or insert appropriate information.

Remove information and requirements not required in respective project, whether or not brackets are present.

Comments, suggestions and recommended changes for this guide specification are welcome and should be submitted as a Criteria Change Request (CCR).

UFGS are intended for design-bid-build contracts; for design-build projects UFGS may require extensive editing by the designer. Navy design-build projects must use NAVFAC Design-Build Master at www.wbdg.org/ndbm.

PART 1 GENERAL

1.1 REFERENCES

NOTE: This paragraph is used to list the publications cited in the text of the guide specification. The publications are referred to in the text by basic designation only and listed in this paragraph by organization, designation, date,

and title.

Use the Reference Wizard's Check Reference feature when you add a Reference Identifier (RID) outside of the Section's Reference Article to automatically place the reference in the Reference Article. Also use the Reference Wizard's Check Reference feature to update the issue dates.

References not used in the text will automatically be deleted from this section of the project specification when you choose to reconcile references in the publish print process.

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING
ENGINEERS (ASHRAE)

ASHRAE 189.1	(2011) Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings
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GREEN BUILDING INITIATIVE (GBI)

GBI GP Compliance	GBI Guiding Principles Compliance Program for New Construction
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GBI Green Globes for NC	(2013) Green Globes(tm) for New Construction Technical Reference Manual
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SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION
(SMACNA)

ANSI/SMACNA 008	(2007) IAQ Guidelines for Occupied Buildings Under Construction, 2nd Edition
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U.S. DEPARTMENT OF ENERGY (DOE)

ISWG Guiding Principles	(2008) High Performance and Sustainable Buildings Guidance
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U.S. GREEN BUILDING COUNCIL (USGBC)

LEED GBDC Ref Guide	(2009; R 2010) LEED Reference Guide for Green Building Design, Construction and Major Renovations of Commercial and Institutional Buildings including Core & Shell and K-12 Projects
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U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

40 CFR 247	Comprehensive Procurement Guideline for Products Containing Recovered Materials
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1.2 SUMMARY

This specification includes general requirements and procedures for this project to be constructed and documented per the federally mandated "Guiding Principles" (GP), Third Party Certification (TPC) requirements (if applicable), UFC 1-200-02, High Performance and Sustainable Building Requirements, and other requirements identified in this specification.

1.3 SUBMITTALS

NOTE: Submittals must be limited to those necessary for adequate quality control. The importance of an item in the project should be one of the primary factors in determining if a submittal for the item should be required.

A "G" following a submittal item indicates that the submittal requires Government approval. Some submittals are already marked with a "G". Only delete an existing "G" if the submittal item is not complex and can be reviewed through the Contractor's QC system. Only add a "G" if the submittal is sufficiently important or complex in context of the project.

For submittals requiring Government approval on Army projects, a code of up to three characters within the submittal tags may be used following the "G" designation to indicate the approving authority. Codes for Army projects using the Resident Management System (RMS) are: "AE" for Architect-Engineer; "DO" for District Office (Engineering Division or other organization in the District Office); "AO" for Area Office; "RO" for Resident Office; and "PO" for Project Office. Codes following the "G" typically are not used for Navy, Air Force and NASA projects.

Use the "S" classification only in SD-11 Closeout Submittals. The "S" following a submittal item indicates that the submittal is required for the Sustainability Notebook to fulfill federally mandated sustainability requirements in accordance with this section.

Choose the first bracketed item for Navy, Air Force and NASA projects, or choose the second bracketed item for Army projects.

NOTE: Sustainability requirements have been identified in many of the technical specification sections. Include additional sustainability requirements throughout the technical specification sections according to goals of this project. Identify products and other submittals required for Guiding Principle Validation (GPV) or Third Party

Certification (TPC), with an "S" next to the item under SD-11 Closeout Submittals. Use the following format under SD-11 to add items in the technical section to comply with the requirements of this section:

<ITM>_{Insert Submittal Item}; _S

"S" submittals are processed as described in Section 01 33 00 SUBMITTAL PROCEDURES.

Make corresponding edits in the products part or the execution part to differentiate those pieces of equipment, products, or activities related to GPV and TPC.

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are [for Contractor QC approval.][for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government.] Submittals with an "S" are for inclusion in the Sustainability Notebook, in conformance to this section. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Preliminary Sustainability Notebook; G[, [____]]

Preliminary High Performance and Sustainable Building Checklist

[SD-07 Certificates

Third Party Certification (TPC)

] SD-11 Closeout Submittals

Final Sustainability Notebook; G[, [____]]

Final High Performance and Sustainable Building Checklist; G[, [____]]

NOTE: Choose bracketed option, "Amended Final Sustainability Notebook Submittal" for projects that require data and performance information to be collected after the BOD of the facility.

Choose bracketed option for "Third Party Certification [Plaque and]Certificates" for TPC projects. For certifications that include a plaque, include the bracketed phrase.

[Amended Final Sustainability Notebook; G[, [____]]

][Third Party Certification [Plaque and]Certificates; G[, [____]]

1.4 GUIDING PRINCIPLES VALIDATION (GPV)

NOTE:

1. GUIDING PRINCIPLES VALIDATION (GPV) applies to all building projects (vertical construction) in accordance with UFC 1-200-02 High Performance and Sustainable Building Requirements.
2. Only GPV (which includes at a minimum HPSB Checklist and initial Sustainability Action Plan) is required for the following types of projects:
 - a. New construction or renovation projects that require a very limited number of construction trades. Examples include: interior painting, replacing floor material, repairing roofs, or resurfacing parking lot.
 - b. Renovation projects less than \$2.5 Million.

Complete initial HPSB Checklist for this project and include at the end of this specification as Attachment 1. Obtain HPSB checklist from respective agency. See paragraph HIGH PERFORMANCE SUSTAINABLE BUILDING (HPSB) CHECKLIST for location.

Provide construction related sustainability documentation to verify achievement of ISWG Guiding Principles Validation (GPV). Provide the following for GPV:

- a. Refer to Attachment 1, HPSB Checklist at the end of this specification section.
- b. Obtain approval of any changes to the HPSB Checklist from the Contracting Officer at the Preconstruction Conference. Contracting Officer's approval establishes identified ISWG Guiding Principles Requirements as the project's sustainability goals.

No variations or substitutions to the HPSB Checklist are allowed without written consent from the Contracting Officer. Immediately bring to the attention of the Contracting Officer any changes that impact meeting the approved ISWG Guiding Principles Requirements for this project and demonstrate that change will not incur additional construction cost or increase the life cycle cost.

- c. Include all work required to incorporate the applicable ISWG Guiding Principles Requirements indicated on the HPSB Checklist and in this contract.
- d. Include construction related documentation to maintain an up-to-date Sustainability Notebook. Supplement construction related documentation containing the following components;

(1) HPSB Checklist

(2) Sustainability Action Plan

NOTE: Use bracketed items below for projects that
exceed thresholds defined in notes under header
above GUIDING PRINCIPLES VALIDATION (GPV).

[(3) Documentation illustrating Guiding Principle (GP) Requirements
compliance

][(4) Commissioning Plan and Reports

11.4.1 Sustainability Action Plan

Include the following information in the Sustainability Action Plan:

- a. Contractor's planned method to achieve each construction related
GP requirement.

NOTE: Use bracketed items below for projects that
exceed thresholds defined in notes under header
above GUIDING PRINCIPLES VALIDATION (GPV).

[b. For each designated construction related ISWG Guiding Principles
Requirements that is not achieved, provide narrative explaining
how mission or activity precludes achieving specific
sustainability requirement or goal. Provide analysis of
particular requirement and level to which project is able to
comply.

- c. Name and contact information for: Contractor's POC responsible for
ensuring sustainability goals are accomplished and documentation
is assembled.

11.4.2 Costs

Contractor is responsible for all costs associated with constructing and
demonstrating that project complies with approved ISWG Guiding Principles
Requirements.

11.4.3 Calculations

NOTE: Use below paragraph when project exceeds
threshold defined in notes under header above
GUIDING PRINCIPLES VALIDATION (GPV).

Provide calculations, product data, and certifications required in this
section to demonstrate compliance with the ISWG Guiding Principles
Requirements.

11.4.4 Third Party Certification (TPC) Documentation

NOTE: Use this paragraph when Third Party
Certification is required and the Designer of Record
registers and certifies the project, with the

Contractor providing the construction documentation.

NOTE: Choose the rating system below that best assists with Guiding Principles Validation, and delete the others.

For USGBC LEED GBDC Reference Guide:

- a. Enter the target level in the bracket.
- b. If using Version 4, revise the reference date in REFERENCES to "2014".
- c. As an alternative, insert USGBC Guiding Principles Compliance in the empty bracket, and delete the other choices.

For GBI Green Globes for NC, enter the target level in the bracket.

Obtain, fill out, and include TPC checklist, and include with this UFGS as Attachment 2.

For certifications that include a plaque, include the bracketed phrase in the first paragraph.

This project has been designed for, and must be constructed to attain a sustainability rating of [LEED GBDC Ref Guide [____]] [GBI GP Compliance] [GBI Green Globes for NC [____]] [____]. Project is already registered with the TPC Organization. Provide construction related sustainability documentation, in the format required by the TPC Organization, to the Contracting Officer for approval, and for final approval by the TPC organization. Third Party Certification is met when Government receives TPC organization certificate[and plaque]. Include the following:

- a. Refer to Attachment 2, TPC Checklist at the end of this specification section.
- b. Obtain approval of the TPC Checklist from the Contracting Officer at the Pre-Construction Conference.

No variations or substitutions to the approved TPC checklist are allowed without written consent from the Contracting Officer. Immediately bring to the attention of the Contracting Officer any project changes that impact meeting the approved TPC Requirements for this project. Demonstrate that change will not: incur additional construction cost; increase the life cycle cost; impact previous TPC Design Review; or impact required TPC certification level.

- c. Complete all work required to incorporate the applicable TPC Requirements.
- d. Maintain the construction related information, and provide replacement pages, in the Sustainability Notebook pertaining to additions and changes to the approved sustainability requirements. The Sustainability Notebook is in electronic format and is explained in the paragraph entitled "SUSTAINABILITY NOTEBOOK". The Sustainability Notebook contains the following components in addition to the GPV components above:

- (1) TPC Checklist
- (2) Sustainability Action Plan

NOTE: Choose the first or second bracketed item.
For second bracketed item, Contractor has to be
entered as a TPC Online Team Member.

- (3) Completed TPC documentation for each identified prerequisite and credit. [Forward to the Contracting Officer for approval.][Upload onto the TPC Online documentation website.]
 - (4) Copy of all correspondence with the TPC organization.
- e. Include the following information in the Sustainability Action Plan. Provide this TPC information in addition to the GPV Action Plan items above:
- (1) Contractor's planned method to achieve each TPC requirement.
 - (2) For each required TPC credit that is attempted but not achieved, provide narrative explaining how mission or activity precludes achieving specific sustainability requirement or goal. Provide analysis of particular requirement and level to which project is able to comply.

NOTE: Choose the bracketed item when post-occupancy
data collection is part of the contract.

- (3) Provide the commissioning plan and schedule for performance testing[, and data collection to take place during first year of facility usage].
 - (4) Name and contact information for: Contractor's Sustainability POC and other names of sustainability professionals on the Contractor's Staff responsible for ensuring TPC sustainability goals are accomplished and documentation is assembled. Contractor's Sustainability POCs are also responsible for ensuring GPV required in paragraph GUIDING PRINCIPLES VALIDATION (GPV) above.
- f. Contractor is responsible for all costs associated with constructing and demonstrating that project complies with approved TPC requirements, including but not limited to:
- (1) TPC coordination with Government's AE and other consultants, TPC website requirements, and management for construction related documentation.
 - (2) Construction work required to incorporate TPC prerequisites and credits.
 - (3) Submittals required to demonstrating compliance with Government approved TPC checklists.

- g. Provide all calculations, product data, and certifications required in this contract to demonstrate compliance with the TPC Requirements of this section.

][1.4.5 Third Party Certification (TPC)

NOTE: Choose this paragraph, and delete the previous, if the Contractor is responsible for achieving the final TPC certification.

NOTE: Choose one option below. Choose the first bracketed paragraph below if the Designer of Record (DOR) has not registered the project with a TPC organization, and the Contractor must do so. Choose the second bracketed paragraph below if the DOR has registered the project with a TPC organization, and will pass the responsibility for final TPC documentation and certification to the Contractor.

NOTE: Choose the rating system below that best assists with Guiding Principles Validation, and delete the others.

For USGBC LEED GBDC Reference Guide:

- a. Enter the target level in the bracket.
- b. If using Version 4, revise the reference date in REFERENCES to "2014".
- c. As an alternative, insert USGBC Guiding Principles Compliance in the empty bracket, and delete the other choices.

For GBI Green Globes, for NC, enter the target level in the bracket.

Obtain, fill out, and include TPC checklist, and include with this UFGS as Attachment 2.

For certifications that include a plaque, include the bracketed phrases below.

[Contractor is responsible for registering and meeting all requirements to achieve Third Party Certification (TPC) level of [LEED GBDC Ref Guide [____]] [GBI GP Compliance] [GBI Green Globes for NC [____]] [____], or other Government-approved equivalent TPC sustainability certification. An equivalent TPC organization must demonstrate equivalency for Government consideration, prior to use on the project. Third Party Certification is met when Government receives TPC organization certificate[and plaque.]

Register project with TPC organization using the following format and content:

- a. Project Title First Line: US Army, US Air Force, US Navy or US Marine

Corps, Building Name (if known)

- b. Project Title Second Line: MILCON P#, DD1391 Project Name
- c. Project Address: UIC (Installation code), Category code, RPUID (Real Property Unique Identifier) Number
- d. Project Owner Organization: US Army, US Air Force, US Navy or US Marine Corps
- e. Primary Contact, Owner: Agency Project Manager
- f. Additional Contact, Building Owner: Public Works Officer or Designee

] [Project is already registered with TPC organization to achieve level of [LEED GBDC Ref Guide [_____]] [GBI GP Compliance] [GBI Green Globes for NC [_____]] [_____]]. The TPC Online management will be turned over to the Contractor, who will assume full responsibility for management and obtaining Final Certification. Third Party Certification is met when Government receives TPC organization certificate[and plaque].

] The TPC Certification requires the following:

- a. Refer to Attachment 2, TPC Checklist at the end of this specification section.
- b. Obtain approval of the TPC Checklist from the Contracting Officer at the Pre-Construction Conference.

No variations or substitutions to the approved TPC checklist are allowed without written consent from the Contracting Officer. Immediately bring to the attention of the Contracting Officer any project changes that impact meeting the approved TPC Requirements for this project. Demonstrate that change will not: incur additional construction cost; increase the life cycle cost; impact previous TPC Design Review; or impact required TPC certification level.

- c. Complete all work required to incorporate the applicable TPC Requirements.
- d. Maintain the construction related information, and provide replacement pages, in the Sustainability Notebook pertaining to additions and changes to the approved sustainability requirements. The Sustainability Notebook is in electronic format and is explained in the paragraph entitled "SUSTAINABILITY NOTEBOOK". The Sustainability Notebook contains the following components in addition to the GPV components above:

- (1) TPC Checklist
- (2) Completed TPC Online forms for each identified prerequisite and credit
- (3) Copy of all correspondence with the TPC organization including proof of TPC registration
- (4) Documentation illustrating compliance with TPC requirements
- (5) TPC Award Certificate

e. Include the following information in the Sustainability Action Plan. Provide this TPC information in addition to the GPV Action Plan items above:

- (1) Contractor's planned method to achieve each TPC requirement.
- (2) For each required TPC credit that is attempted but not achieved, provide narrative explaining how mission or activity precludes achieving specific sustainability requirement or goal. Provide analysis of particular requirement and level to which project is able to comply.
- (3) Name and contact information for: Contractor's Sustainability POC and other names of sustainability professionals on the Contractor's Staff responsible for ensuring TPC sustainability goals are accomplished and documentation is assembled
- (4) Provide the plan and schedule for performance testing, data collection, and commissioning[to take place during first year of facility usage].

**NOTE: For certifications that include a plaque,
included the bracketed phrase.**

f. Contractor is responsible for all costs associated with constructing and demonstrating that project complies with approved TPC requirements, including but not limited to:

- (1) Final TPC review, certification [and plaque]fees
- (2) Online (or offline with secure facilities) TPC management and documentation.
- (3) Obtaining TPC certification based on Government-approved sustainability goals.
- (4) Construction work required to incorporate TPC prerequisites and credits.
- (5) Submittals required to demonstrate compliance with Government approved TPC checklists.

g. Provide all calculations, product data, and certifications required in this specification to demonstrate compliance with the TPC Requirements.

h. Provide all online (or offline, with secure facilities) TPC management and documentation.

i. Contractor is responsible for all required responses to TPC.

**NOTE: Choose the following paragraph for TPC
certifications that include a certification. For
certifications that include a plaque, included the
bracketed phrases.**

- j. Provide TPC [Plaque and]Certificates. Use format below to create the Plaque, Certificate and Letter of Congratulations. Forward to parties designated by Contracting Officer:

(1) [Plaque:

Name: Final Building Name. If unknown, provide Form DD1391 Project Name.

(2)]Certificate:

Project Title, first line: P-(X); Form DD1391 Project Name).

Project Title, second line: UIC (Installation code)

(3) Letter Congratulations:

Address letter to Facility's Installation commander Name. Address the letter to an individual person.

**NOTE: For projects required to obtain TPC, include
the bracketed phrases.**

]1.5 SUSTAINABILITY SUBMITTALS

Provide HPSB Checklist and other documentation in the Sustainability Notebook to indicate compliance with the sustainability requirements of the project.

1.5.1 High Performance Sustainable Building (HPSB) Checklist

Provide construction documentation that provides proof of and supports compliance with the completed HBSP Checklist.

1.5.1.1 HPSB Checklist Submittals

Submit updated HPSB Checklist with each Sustainability Notebook submittal. Attach final HPSB Checklist to DD1354 Real Property Record Submittal.

1.5.1.2 HPSB Checklist Public Access

Where not included as attachment to this specification section, use the following as HPSB Checklist for respective service branch. Where Internet address appears on two lines, copy full address into Internet browser.

- a. Air Force - Air Force MILCON Sustainability Requirements Scoresheet, Attachment 3 of "AF Sustainable Design Development Implementing Guidance Memo" http://www.wbdg.org/ccb/browse_cat.php?c=265
- b. Army - Energy & Sustainability Record Card
http://wbdg.org/ccb/ARMYCOE/COEECB/ecb_2013_25.pdf
- c. Navy - NAVFAC Sustainability & Energy Data Record Card/High Performance and Sustainable Building Checklist
http://www.wbdg.org/pdfs/navfac_sustainable_energy_data_record_card.pdf

1.5.2 "S" Submittals for Sustainability Documentation

Submit the GPV[and TPC] sustainability documentation required in this specification as "S" submittals. Highlight GPV[and TPC] compliance data in "S" submittal.

**NOTE: For projects required to obtain TPC, include
the bracketed phrases.**

1.5.3 SUSTAINABILITY NOTEBOOK

Provide and maintain a comprehensive Sustainability Notebook to document compliance with the sustainability requirements identified in the approved HPSB[and TPC] Checklist[s]. Sustainability Notebook must contain all required data to support full compliance with the ISWG Guiding Principles Requirements [and TPC requirements]. Sustainability Notebook is in the form of an Adobe PDF file; bookmarked at each ISWG Guiding Principles Requirement [, TPC requirement,]and sub-bookmarked at each document. Match format to ISWG Guiding Principles numbering system indicated herein. Maintain up to date information, spreadsheets, templates, and other required documentation with each current submittal.[For TPC projects, provide a second Table of contents using TPC numbering system. Locate documentation unique to TPC here. Where TPC documentation would repeat GP documentation, insert note referring reviewer to GP documentation.]

Contracting Officer may deduct from the monthly progress payment accordingly if Sustainability Notebook information is not current, until information is updated and on track per project goals.

1.5.3.1 Sustainability Notebook Submittal Schedule

Provide Sustainability Notebook Submittals at the following milestones of the project:

a. Preliminary Sustainability Notebook

Submit preliminary Sustainability Notebook for approval at the Pre-construction conference. Include Preliminary High Performance and Sustainable Building Checklist.

b. Construction Progress Meetings. Update GP[and TPC] documentation in the Sustainability Notebook[and TPC Online tool] for each meeting.

c. Final Sustainability Notebook

Submit updated Sustainability Notebook within 60 days after the Beneficial Occupancy Date (BOD). Final progress payment retainage may be held by Contracting Officer until final sustainability documentation is complete. [Submit three (3) electronic copies of the Final Sustainability Notebook on DVDs to the Government.] Include Final High Performance and Sustainable Building Checklist.

**NOTE: Include the following paragraph if the
project requires Commissioning or other data
collection after facility turnover.**

For projects required to submit electronic copies,
include the bracketed phrase.

For projects required to obtain TPC, include the
bracketed phrase.

[d. Amended Final Sustainability Notebook

Amend and resubmit the Final Sustainability Notebook to include commissioning, testing and balancing, and collection of performance requirements. [Submit three (3) final electronic copies of the Amended Final Sustainability Notebook Submittal on DVDs to the Government no longer than 30 days after the GP[, TPC][, and Cx] designated data collection period.]

]1.6 DOCUMENTATION REQUIREMENTS

**NOTE: Choose the following bracketed paragraph for
Third Party Certification (TCP) projects.**

[Third Party Certification requirements or credits are mandatory when they have requirements that match a Guiding Principle Requirement. Documentation used to demonstrate TPC compliance may be used to demonstrate GP compliance.

]

NOTE: The following subparagraphs provide Guiding Principle Requirements. Edit out Guiding Principle Requirements that are not applicable to the project. Add sustainability requirements based on project requirements.

Guiding principles that are related to design must already be designed into the project.

Incorporate each of the following ISWG Guiding Principles Requirements into project construction; and provide documentation that proves compliance with each listed requirement. Items below are organized according to the ISWG Guiding Principles. For projects that require TPC, refer to Third Party Certifier's reference manuals for TPC requirements.

1.6.1 Commissioning

NOTE: Edit this paragraph to coordinate with project commissioning requirements and other contract document requirements.

Work with the Commissioning Authority (CxA) to achieve requirements of the Commissioning plan and other contract document requirements at each stage of commissioning. Maintain up-to-date records of commissioning activities in the Sustainability Notebook, to include commissioning plan and summary commissioning report.

1.6.2 Energy Efficient Equipment

Provide only energy-using equipment that is Energy Star rated, or has the Federal Energy Management Program (FEMP) recommended efficiency. Where Energy Star or FEMP recommendations have not been established, provide most efficient equipment available. Provide only energy using equipment that meets FEMP requirements for low standby power consumption. Energy efficient equipment can be found at: <http://www1.eere.energy.gov/femp/> and <http://www.energystar.gov/>. Provide the following documentation:

Proof that equipment is labeled energy efficient and complies with the cited requirements.

1.6.3 Benchmarking

Provide report of initial actual energy performance with the energy design targets. Provide the following documentation:

Prefinal Performance Report with data collected from the first 60 days of operation of the facility after Beneficial Occupancy Date (BOD). Submit this information with the Final Sustainability Notebook Submittal.

1.6.4 Water Conserving Fixtures

Provide only water-consuming products that are EPA WaterSense labeled, or the most efficient water fixtures available when EPA Watersense products are not available. Provide the following documentation:

Proof that water fixtures are efficient and comply with the cited requirements.

1.6.5 Reduce Volatile Organic Compounds (VOC) (Low Emitting Materials)

Provide materials and products with low pollutant emissions, including composite wood products, adhesives, sealants, interior paints and finishes, carpet systems, and furnishings. Meeting the requirements of ASHRAE 189.1 Sections 8.4.2 (Prescriptive Option: Materials) or Section 8.5.2 (Performance Option: Materials) demonstrates compliance. Insulation products must meet the requirements of Section 8.5.2 (Performance Option: Materials). Provide the following documentation:

- a. Demonstrate that materials do not exceed maximum VOC emissions of cited standards. VOC averaging is allowed where coatings are subject to human contact or harsh environmental conditions.
- b. Demonstrate that flooring materials comply with VOC emissions of cited standards.
- c. Demonstrate that composite wood and agrifiber products and associated laminating adhesives contain no added urea-formaldehyde.
- d. Demonstrate that furniture and seating complies with low emissions requirements.
- e. Create and maintain a list of above listed products used on the project within the building vapor barrier. Demonstrate how product meets cited standards.

1.6.6 Indoor Air Quality During Construction

Prior to construction, create indoor air quality plan. Implement IAQ plan during construction and flush building air before occupancy.

a. Construction submittal documentation required:

- (1) For new construction and for renovation of unoccupied existing buildings, comply with ASHRAE 189.1 Section 10.3.1.4. (Indoor Air Quality (IAQ) Construction Management), with maximum outdoor air consistent with achieving relative humidity no greater than 60 percent. For renovation of occupied existing buildings, comply with ANSI/SMACNA 008 IAQ Guidelines for Occupied Buildings Under Construction.
- (2) Provide required documentation showing that after construction ends and prior to occupancy, new HVAC filters were installed, and building air was flushed out in accordance with UFC 1-200-02.

1.6.7 Environmentally Preferred Products

Use products designated for Federal procurement to meet environmentally preferred requirements. Provide the following documentation:

Provide list of environmentally preferable products used on this project that meet the requirements of UFC 1-200-02.

1.6.8 Recycled Content

Provide materials on this project with aggregated total recycled content equal to or greater than 10 percent. In addition, comply with 40 CFR 247. Refer to for assistance identifying products cited in 40 CFR 247. Provide the following documentation:

- a. Total amount of recycled content contained in building materials as a percentage of total cost of all building materials on the project (mechanical, electrical, and plumbing components, fire protection equipment and transportation are excluded).
- b. Manufacturers documents stating the recycled content by material, or written justification for claiming one of the exceptions allowed under RCRA 6002.
- c. Substitutions: Contractor may submit for Government approval, proposed alternative products or systems that provide equivalent performance and appearance and have greater contribution to project recycled content requirements. For all such proposed substitutions, submit with the Sustainability Action Plan accompanied by product data demonstrating equivalence.

1.6.9 Bio-Based Products

Utilize products and material made from biobased materials to the maximum extent possible without jeopardizing the intended end use or detracting from the overall quality delivered to the end user. Use only supplies and materials of a type and quality that conform to applicable specifications and standards.

Biobased products that are designated for preferred procurement under the

USDA BioPreferred Program must meet the required minimum biobased content. Refer to <http://www.biopREFERRED.gov> for the product categories and BioPreferred Catalog. Provide the following documentation:

- a. For biobased products used on this project, provide biobased product content percentage and biobased source of material. Indicate name of the manufacturer, cost of each product and the use of each product on this project.
- b. For products that meet USDA BiopREFERRED Program, provide documentation of USDA BiopREFERRED label.

1.6.10 Waste Material Management (Recycling - Construction)

Divert construction debris from landfill disposal where markets or on-site recycling exists in accordance with Section 01 74 19 CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT. Provide the following documentation:

- a. Documentation showing total amount of construction debris diverted from landfill as a percentage of all construction debris on the project.
- b. Include project's Construction Waste Management Plan and all dumpster haul tickets.

1.6.11 Ozone Depleting Substances

The use of CFC-based refrigerants in HVAC&R systems is prohibited. Eliminate the use of ozone depleting substances (CFC's, HCFCs, or Halons) during and after construction where alternative environmentally preferable products are available, taking into account lifecycle impacts. Meet the requirements of ASHRAE 189.1 Section 9.3.3 Refrigerants for no CFC-based refrigerants in heating ventilation, air conditioning and refrigeration systems (except for fire suppression system requirements, covered elsewhere in this specification). Provide the following documentation:

- a. MSDS sheets for all refrigerants provided
- b. Products that meet the criteria of U.S. EPA Significant New Alternatives Policy, available at <http://www.epa.gov/ozone/snap/index.html>.

1.6.12 Validation and Certification Restrictions

The Contractor's purchase of renewable energy certificates (RECs) specifically to meet project sustainability goals is prohibited.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 SUSTAINABILITY COORDINATION

NOTE: Choose the bracketed options below for TPC projects.

3.1.1 Coordinating Sustainability Documentation Progress

Provide sustainability focus and coordination at the following meetings to achieve sustainability goals. Contractor's designated [TPC accredited] sustainability professional responsible for GP [and TPC] documentation must participate in the following meetings to coordinate documentation completion.

- a. Pre-Construction Conference: Discuss the following: [TPC and] HPSB Checklist[s], Sustainability Action Plan, Construction submittal requirements and schedule, individuals responsible for achieving each Guiding Principle Requirement[and TPC prerequisite and credit].
- b. Construction Progress Meetings: Review GP[and TPC] sustainability requirements with project team including contractor and sub-contractor representatives. Demonstrate GP[and TPC] documentation is being collected and updated to the Sustainability Notebook[and TPC Online tool].
 - (1) Facility Turnover Meetings: Review Sustainability Notebook[, and TPC Online submission] for completeness and identify any outstanding issues relating to final documentation requirements.
 - (2) Final Sustainability Notebook Review

NOTE: Choose the following bracketed option for projects that require the Contractor to obtain the TPC certification. Include first sentence when Contracting Office has verified if the building occupant wants a framed certificate and design of framing. For certifications that include a plaque, include the bracketed phrase for the plaque.

[3.2 SUSTAINABILITY AWARD

Finalize the sustainability certification process and obtain the TPC Certification [Plaque and]Certificates, indicating completion of the projects sustainability goals.

3.2.1 Third Party Certification [Plaque and]Certificates

[Provide one original framed copy of the certificate, mounted in 25 mm 1 inch deep metal frames, with double matt, and wire hangers, in location approved by Contracting Officer.] Provide [_____] of original certificates, and deliver to Contractor Officer, unless otherwise instructed. [Provide and hang Plaque in a prominent interior location approved by the Contracting Officer.]

] -- End of Section --