
USACE / NAVFAC / AFCEC /NASA UFGS-01 33 29 (February 2017)
Change 2 - 11/17

Preparing Activity: NAVFAC Superseding
UFGS-01 33 29 February 2015

UNIFIED FACILITIES GUIDE SPECIFICATIONS

References are in agreement with UMRL dated April 2018

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SECTION 01 33 29

SUSTAINABILITY REPORTING
02/17

NOTE: This guide specification covers the requirements for providing sustainability documentation for Guiding Principles Validation (GPV), and Third Party Certification (TPC). Guiding Principles Validation (GPV) is equivalent to meeting the requirements of UFC 1-200-02 "HIGH PERFORMANCE AND SUSTAINABLE BUILDING REQUIREMENTS." All projects must meet the requirements of UFC 1-200-02.

Use a properly edited version of this guide specification for projects that contain one or more buildings with any of the following: new building; addition; or in an existing building larger than 5,000 SF, renovation with total cost (includes new work, renovation, operations and maintenance; sustainment, restoration, and modernization associated with an existing building renovation) greater than \$3M and 50 percent or more Estimated Replacement Cost.

Navy only: Use a properly edited version of this guide specification in each project that includes at least one renovation in an existing building with total cost (includes new work, renovation, operations and maintenance; sustainment, restoration, and modernization associated with an existing building renovation) greater than \$3M, regardless of Estimated Replacement Cost or square footage of building.

Use the HPSB Checklist for the Component who will maintain the building asset in their Real Property Record. Complete the HPSB Checklist for each applicable building in the project, before attaching to this specification. Check with the user Command for additional requirements. (Where Internet address appears on multiple lines, copy full address into Internet browser.)

- a. Air Force - Use "AF Sustainability Requirements

Scoresheet, GP version" for applicable projects with design starts 01Dec16 or after:

<http://www.wbdg.org/ffc/af-afcec/sustainable-design-development-sdd/sustainability-tracking-reporting>

b. Army - Energy & Sustainability Record Card

<http://www.wbdg.org/ffc/army-coe/policies-and-guidance-army-design-and-construction/army-energy-sustain-record-card>

c. Navy - Complete the NAVFAC High Performance and Sustainable Building (HPSB) Checklist (formerly known as Sustainability & Energy Data Record Card). Template can be downloaded from the project's eProjects record, or from:

<http://www.wbdg.org/ffc/navy-navfac/sustainable-development-program/required-tracking>

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 item(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 <http://www.wbdg.org/ffc/navy-navfac/design-build-request-proposal>.

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 (2014) Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings

COUNCIL ON ENVIRONMENTAL QUALITY (CEQ) (WHITE HOUSE)

HPSB Guiding Principles (2016) Guiding Principles for Sustainable Federal Buildings and Determining Compliance with the Guiding Principles for Sustainable Federal Buildings

GREEN BUILDING INITIATIVE (GBI)

GBI GP Compliance (2016) GBI Guiding Principles Compliance Program for New Construction (DOD Version)

GBI Green Globes for NC (2017) Green Globes(tm) for New Construction Technical Reference Manual

SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION (SMACNA)

ANSI/SMACNA 008 (2007) IAQ Guidelines for Occupied Buildings Under Construction, 2nd Edition

U.S. DEPARTMENT OF AGRICULTURE (USDA)

FSRIA 9002 Farm Security and Rural Investment Act Section 9002 (USDA BiopREFERRED Program)

U.S. DEPARTMENT OF ENERGY (DOE)

Energy Star (1992; R 2006) Energy Star Energy Efficiency Labeling System (FEMP)

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

SNAP (2016) EPA's Significant New Alternatives Policy Program

U.S. GREEN BUILDING COUNCIL (USGBC)

GBCI GP Assessment (2016) Guiding Principles Assessment by GBCI (DOD Version)

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

10 CFR 433.300

Subpart C - Green Building Certification for Federal Buildings

40 CFR 247

Comprehensive Procurement Guideline for Products Containing Recovered Materials

1.2 SUMMARY

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

1.3 SUBMITTALS

NOTE: Review Submittal Description (SD) definitions in Section 01 33 00 SUBMITTAL PROCEDURES and edit the following list to reflect only the submittals required for the project.

The Guide Specification technical editors have designated those items that require Government approval, due to their complexity or criticality, with a "G." Generally, other submittal items can be reviewed by the Contractor's Quality Control System. Only add a "G" to an item, 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 eNotebook to fulfill federally mandated sustainable requirements in accordance with Section 01 33 29 SUSTAINABILITY REPORTING.

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 Quality Control 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 eNotebook, in conformance to this section. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Preliminary High Performance and Sustainable Building Checklist; G[, [_____]]

Sustainability Action Plan; G[, [_____]]

Preliminary Sustainability eNotebook; G[, [_____]]

SD-11 Closeout Submittals

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

Final Sustainability eNotebook; G[, [_____]]

Amended Final Sustainability eNotebook; G[, [_____]]

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

NOTE: Choose bracketed option for "Third Party Certification Certificates or Validation" for TPC projects. For certifications/validations that include a plaque, include the bracketed phrase.

[Third Party Certification Certificates or Validation; G[, [_____]]

1.4 GUIDING PRINCIPLES VALIDATION (GPV)

NOTE: GUIDING PRINCIPLES VALIDATION (GPV) is required for all building (vertical construction) in accordance with UFC 1-200-02 HIGH PERFORMANCE AND SUSTAINABLE BUILDING REQUIREMENTS and the notes under this specification title above.

Complete Preliminary HPSB Checklist and include at the end of this specification as Attachment 1. For projects with multiple buildings, attach HPSB Checklist for each building. Obtain HPSB checklist from respective agency. See the notes under this specification title above.

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

- a. Refer to Attachment 1, HPSB Checklist at the end of this specification section. (Multiple checklists indicate multiple buildings that require HPSB tracking.)
- b. Obtain approval of any changes to the HPSB Checklist from the Contracting Officer at the Preconstruction Conference. Contracting Officer's approval establishes identified HPSB 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 HPSB Guiding Principles Requirements for this project and demonstrate that change will not incur additional construction cost or increase the life cycle cost.

- c. Provide all work, including "S" submittals, required to incorporate the applicable HPSB Guiding Principles Requirements indicated on the HPSB Checklist and in this contract.
- d. Provide Sustainability Action Plan
- e. Provide construction related documentation for the project Sustainability eNotebook, and keep updated with regularly-scheduled construction meetings. Include construction related documentation containing the following components;

(1) HPSB Checklist

(2) Sustainability Action Plan

- (3) Documentation illustrating HPSB Guiding Principles Requirements compliance (including "S" submittals)

1.4.1 Sustainability Action Plan

Include the following information in the Sustainability Action Plan:

- a. Planned method to achieve each construction related GP requirement.
- b. For each designated construction related HPSB 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. Final government-approved narrative(s) must be included with the HPSB Checklist submittal.
- c. Name and contact information for: POC responsible for ensuring sustainability goals are accomplished and documentation is assembled.
- d. Include the Indoor Air Quality plan with the Sustainability Action Plan.

1.4.2 Costs

Bear all costs associated with constructing and demonstrating that project complies with approved HPSB Guiding Principles Requirements.

1.4.3 Calculations

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

NOTE: In addition to GPV and Sustainability eNotebook, Third Party Certification (TPC) is required for either of the following thresholds:

- 1. Each new building with construction cost greater than \$3M
- 2. In existing building over 5,000 SF, renovation with total cost greater than \$3M and 50 percent or more of the Estimated Replacement Cost (ERC).

TPC is the generic term for a third party product that provides either certification of the third party vendor's proprietary product requirements (examples LEED, Green Globes), or a validation program by the third party vendor that this UFC's requirements have been met (examples: Guiding Principles Assessment, Guiding Principles Compliance).

For each building that meets one of the thresholds above, choose one of the following two TPC paragraphs below, based on how TPC is executed.

[1.4.4 Third Party Certification (TPC) Documentation

NOTE: Choose this paragraph for Third Party Certification or validation when the Designer of Record is responsible for the entire TPC process, with the Contractor providing the construction documentation. This is the preferred method of TPC execution.

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

For Air Force ONLY: Choose one of the following methods for executing TPC:

- a. For Guiding Principles Assessment by GBCI (DOD Version), choose "GBCI GP Assessment", use only DOD version, and ask for it when registering.
- b. For Green Building Initiative (GBI) Guiding Principles Compliance (DOD Version), or "GBI GP Compliance", use only DOD version, and ask for it when registering.

For Army projects ONLY: Choose only the following method for executing TPC:

- a. For USGBC LEED v4, choose "LEED BDC Ref Guide", and enter "Silver" in the bracket. For use of alternate certification systems, a waiver must be submitted per the current Army Sustainable Design and Development Policy.

For Navy ONLY: Choose one of the following methods for executing TPC:

- a. For USGBC LEED v4, choose "LEED BDC Ref Guide", and enter the target level in the bracket.
- b. For Guiding Principles Assessment by GBCI (DOD Version), choose "GBCI GP Assessment", use only DoD version, and ask for it when registering.
- c. For Green Building Initiative (GBI) Guiding Principles Compliance (DOD Version), or "GBI GP Compliance", use only DoD version, and ask for it when registering.
- d. For Green Building Initiative (GBI) Green Globes, choose "GBI Green Globes for NC", and enter the target level in the bracket.
- e. For an alternate certification system, use only those that comply with the minimum requirements of

10 CFR 433.300 Subpart C – Green Building Certification for Federal Buildings, and insert the name of the compliant system in the empty bracket. For Navy, Facilities Engineering Command (FEC) Capital Improvements (CI) Core must authorize the use of alternative system.

Obtain, fill out, and include TPC checklist, and include with this UFGS as Attachment 2. For projects with multiple buildings, attach TPC Checklist for each building that requires TPC.

For certifications/validations 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 BDC Ref Guide [____]] [GBCI GP Assessment] [GBCI GP Compliance] [GBCI 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 or validation[and plaque]. Include the following:

- a. Refer to Attachment 2, TPC Checklist at the end of this specification section. (Multiple checklists indicate multiple buildings that require TPC.)
- 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; impact required TPC 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 eNotebook pertaining to additions and changes to the approved sustainability requirements. Maintain the Sustainability eNotebook in electronic format. For more explanation, refer to paragraph SUSTAINABILITY eNOTEBOOK. Provide the following components in the Sustainability eNotebook, in addition to the GPV components above:

(1) TPC Checklist

NOTE: Choose the first bracketed item and delete the second if Designer of Record is responsible for all TPC documentation tracking. Choose the second

bracketed item and delete the first if the Contractor is responsible for TPC documentation tracking. For this option, ensure Contractor is included as a TPC Online Team Member in the TPC online project tracking system (where applicable.)

- (2) Completed TPC documentation for each identified requirement. [Forward to the Contracting Officer for approval.] [Upload onto the TPC Online documentation website.]
- (3) Copy of all correspondence with the TPC organization.
- e. Provide the following information in the Sustainability Action Plan. Provide this TPC information in addition to the GPV Action Plan items above:
 - (1) Planned method to achieve each TPC requirement.
 - (2) For each TPC requirement 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) Provide name and contact information for: Sustainability POC and other names of sustainability professionals responsible for ensuring TPC sustainability goals are accomplished and documentation is assembled. Sustainability POCs are also responsible for ensuring GPV required in paragraph GUIDING PRINCIPLES VALIDATION (GPV) above.
- f. Bear 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 requirements.
 - (3) Submittals required to demonstrating compliance with Government approved TPC checklists.
 - (4) Documentation illustrating compliance with TPC requirements and additional documentation required by the TPC.
- 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.

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

For Air Force ONLY: Choose one of the following methods for executing TPC:

a. For Guiding Principles Assessment by GBCI (DOD Version), choose "GBCI GP Assessment", use only DOD version, and ask for it when registering.

b. For Green Building Initiative (GBI) Guiding Principles Compliance (DOD Version), or "GBI GP Compliance", use only DOD version, and ask for it when registering.

For Army projects ONLY: Choose only the following method for executing TPC:

a. For USGBC LEED v4, choose "LEED BDC Ref Guide", and enter "Silver" in the bracket. For use of alternate certification systems, a waiver must be submitted per the current Army Sustainable Design and Development Policy.

For Navy ONLY: Choose one of the following methods for executing TPC:

a. For USGBC LEED v4, choose "LEED BDC Ref Guide", and enter the target level in the bracket.

b. For Guiding Principles Assessment by GBCI (DOD Version), choose "GBCI GP Assessment", use only DoD version, and ask for it when registering.

c. For Green Building Initiative (GBI) Guiding Principles Compliance (DOD Version), or "GBI GP Compliance", use only DoD version, and ask for it when registering.

d. For Green Building Initiative (GBI) Green Globes, choose "GBI Green Globes for NC", and enter the target level in the bracket.

e. For an alternate certification system, use only those that comply with the minimum requirements of 10 CFR 433.300 Subpart C – Green Building Certification for Federal Buildings, and insert the name of the compliant system in the empty bracket. For Navy, Facilities Engineering Command (FEC) Capital Improvements (CI) Core must authorize the use of alternative system.

Obtain, fill out, and include TPC checklist, and include with this UFGS as Attachment 2. For projects with multiple buildings, attach TPC Checklist for each building that requires TPC.

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

NOTE: Choose the following bracketed paragraph if the Designer of Record (DOR) has not registered the project with a TPC organization, and the Contractor must do so. Delete the second bracketed paragraph.

[1.4.5.1 TPC Registration Required

Register and achieve Third Party Certification (TPC), by meeting all TPC and project requirements for a level of [LEED BDC Ref Guide [____]] [GBCI GP Assessment] [GBI GP Compliance] [GBI Green Globes for NC [____]], or Government-approved equivalent TPC sustainability certification or validation. An equivalent TPC organization must demonstrate equivalency for Government consideration and meet the requirements of 10 CFR 433.300, prior to use on the project. Third Party Certification is met when Government receives TPC organization certificate or validation[and plaque.]

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

- a. Project Title First Line: Building Owner (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. Building Owner Organization: US Army, US Air Force, US Navy or US Marine Corps
- g. Additional Contact, Building Owner: Public Works Officer, Base Civil Engineer, or Designee

NOTE: Choose the following paragraph if the DOR has registered the project with a TPC organization, and will pass the responsibility for final TPC documentation and certification/validation to the Contractor. Delete the previous paragraph.

][1.4.5.2 TPC Already Registered

Project is already registered with TPC organization to achieve level of [LEED BDC Ref Guide [____]] [GBCI GP Assessment] [GBI GP Compliance] [GBI Green Globes for NC [____]] or [____] TPC. When applicable, request

TPC online access turnover from Government. Manage and provide all documentation for requirements of TPC, and obtain Final Certification or validation. Third Party Certification is met when Government receives TPC organization certificate or validation[and plaque].

11.4.5.3 TPC Management and Certification

The TPC Certification or validation requires the following:

- a. Refer to Attachment 2, TPC Checklist at the end of this specification section. (Multiple checklists indicate multiple buildings that require TPC.)
- 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; impact required TPC certification or validation 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 eNotebook pertaining to additions and changes to the approved sustainability requirements. Maintain the Sustainability eNotebook in electronic format. For more explanation, refer to paragraph SUSTAINABILITY eNOTEBOOK. Provide the following components in the Sustainability eNotebook, in addition to the GPV components above:
 - (1) TPC Checklist
 - (2) Completed TPC Online forms for each identified requirements
 - (3) Copy of all correspondence with the TPC organization including proof of TPC registration
 - (4) Documentation illustrating compliance with TPC requirements and additional documentation as requested by the TPC
 - (5) TPC Award Certificate or validation
- e. Provide the following information in the Sustainability Action Plan. Provide this TPC information in addition to the Sustainability Action Plan items above:
 - (1) Planned method to achieve each TPC requirement.
 - (2) For each TPC requirement 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) Provide name and contact information for: Sustainability POC and other names of sustainability professionals responsible for ensuring TPC sustainability goals are accomplished and documentation is assembled. Sustainability POCs are also responsible for ensuring GPV required in paragraph GUIDING PRINCIPLES VALIDATION (GPV) above.

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

- f. Bear all costs associated with constructing and demonstrating that project complies with approved TPC requirements, including but not limited to:
 - (1) Final TPC review, certification or validation [and plaque]fees
 - (2) Online (or offline with secure facilities) TPC management and documentation.
 - (3) Obtaining TPC certification or validation based on Government-approved sustainability goals.
 - (4) Construction work required to incorporate TPC requirements.
 - (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. Provide all required responses to TPC.

NOTE: Choose the following paragraph for TPC that includes a certificate or validation. For TPC that include a plaque, include the bracketed phrases.

j. Provide TPC [Plaque and]Certificates or validation. Use format below to create the Plaque, Certificate or validation and Letter of Congratulations (when provided). Forward to parties designated by Contracting Officer:

[(1) Plaque:

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

] (2) Certificate or Validation:

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

Project Title, second line: UIC (Installation code)

(3) Letter Congratulations (when provided):

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

k. Once Final TPC is achieved, turn over Administrative rights to online TPC to the Public Works Office, Base Civil Engineer, or designee, provided by the Contracting Officer.

]1.5 SUSTAINABILITY SUBMITTALS

Provide HPSB Checklist and other documentation in the Sustainability eNotebook 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 HPSB Checklist.

1.5.1.1 HPSB Checklist Submittals

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

1.5.2 "S" Submittals for Sustainability Documentation

NOTE: Include the bracketed phrases below for projects required to obtain TPC.

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

1.5.3 Sustainability eNotebook

NOTE: Include the bracketed TPC phrases for projects required to obtain TPC.

Provide and maintain a comprehensive Sustainability eNotebook to document compliance with the sustainability requirements identified in the approved HPSB[and TPC] Checklist. Sustainability eNotebook must contain all required data to support full compliance with the HPSB Guiding Principles Requirements, including HPSB checklist, Sustainable Action Plan, calculations, labels, certifications [and TPC requirements]. Sustainability eNotebook is in the form of an Adobe PDF file; bookmarked at each HPSB Guiding Principles Requirement [, TPC requirement,] and sub-bookmarked at each document. Match format to HPSB 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, for maintaining documentation unique to TPC]

Contracting Officer may deduct from the monthly progress payment

accordingly if Sustainability eNotebook information is not current, until information is updated and on track per project goals.

1.5.3.1 Sustainability eNotebook Submittal Schedule

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

a. Preliminary Sustainability eNotebook

Submit preliminary Sustainability eNotebook for approval at the Pre-construction conference. Include Preliminary High Performance and Sustainable Building Checklist[and TPC checklist].

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

c. Final Sustainability eNotebook

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

NOTE: Include the number of electronic copies in the bracket.

Include the bracketed phrase for projects required to obtain TPC.

d. Amended Final Sustainability eNotebook

Amend and resubmit the Final Sustainability eNotebook to include post-occupancy corrections, updates, and requirements. Include Amended Final High Performance and Sustainable Building Checklist. Final progress payment retainage may be held by Contracting Officer until amended final sustainability documentation is complete. Submit [_____] final electronic copies of the Amended Final Sustainability eNotebook Submittal on DVDs to the Government no longer than 30 days after the GP[, TPC] designated data collection period.

1.6 DOCUMENTATION REQUIREMENTS

a. Incorporate each of the following HPSB Guiding Principles Requirements into project construction; and provide documentation that proves compliance with each listed requirement. Items below are organized according to the HPSB Guiding Principles. For life-cycle cost analysis requirements, one document with all analyses is acceptable, with Contracting Officer approval.

b. For each of the following paragraphs that require the use of products listed on Government-required websites, provide documentation of the process used to select products, or process used to determine why listed products do not meet project performance requirements.

NOTE: The following subparagraphs provide Guiding Principle Requirements.

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

Delete requirements that are not applicable to the project. Non-applicability requires one of the following justifications:

- 1. Life-cycle cost effectiveness (an LCCA is required as proof for justifying missed energy or water targets);**
- 2. Mission exclusion (ex: no daylighting in a theater or a SCIF);**
- 3. Location/regional exclusion (ex: no local recycling facility); or**
- 4. Locale exclusion (ex: there is no steam to meter).**

1.6.1 Commissioning

NOTE: Include UFGS Section 01 91 00.15 TOTAL BUILDING COMMISSIONING for projects that require commissioning.

Submit approved Final Commissioning Report required by Section 01 91 00.15 TOTAL BUILDING COMMISSIONING as proof of this tracking requirement.

1.6.2 Energy Efficient Products

Provide only energy-using products that are Energy Star rated, or have the Federal Energy Management Program (FEMP) recommended efficiency. Where Energy Star or FEMP recommendations have not been established, provide most efficient products that are life-cycle cost effective. Provide only energy using products that meet FEMP requirements for low standby power consumption. Energy efficient products can be found at: <https://energy.gov/eere/femp/federal-energy-management-program> and <https://www.energystar.gov/>. Provide the following documentation:

Proof that products are labeled energy efficient and comply with the cited requirements.

1.6.3 Indoor Water Use

Provide only water-consuming products that are EPA WaterSense labeled, or the most efficient water fixtures available that meet the requirements of ASHRAE 189.1 Section 6.3.2, when EPA WaterSense products are not available. Provide the following documentation:

For products available with EPA WaterSense labeling, proof that fixtures are labeled EPA WaterSense or Energy Star; for all other fixtures, proof they comply with the cited efficiency requirements.

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

Meet the requirements of Table 3-1 at the end of this specification.
Provide the following documentation:

Provide certifications or labels that demonstrate compliance with cited requirements.

1.6.5 Indoor Air Quality During Construction

Prior to construction, create indoor air quality (IAQ) plan. Develop and implement the IAQ construction management plan during construction and flush building air before occupancy.

NOTE: Choose the first bracketed sentence for new construction or renovation projects in buildings that are not occupied during construction.

Choose the second bracketed sentence for renovation projects in buildings that remain occupied during construction.

[For new construction and for renovation of unoccupied existing buildings, indoor air quality plan must meet the requirements of 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.]

NOTE: Choose "building" for all new construction projects, and for renovation projects that substantially replace the building from the foundation up. Choose "area" for all other renovation projects.

Provide documentation showing that after construction ends and prior to occupancy, HVAC filters were replaced and [building][area] air was flushed out in accordance with the cited standard.

1.6.6 Recycled Content

Comply with 40 CFR 247. Refer to <https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program> for assistance identifying products cited in 40 CFR 247. Selected products must comply with non-proprietary requirements of the Federal Acquisition Regulation, and must meet performance requirements. Provide the following documentation:

- a. Manufacturers' documents stating the recycled content by material, or written justification for claiming one of the exceptions allowed on the cited website.
- b. Substitutions: 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.

1.6.7 Bio-Based Products

Provide products and material composed of the highest percentage of biobased materials (including rapidly renewable resources and certified sustainably harvested products), consistent with FSRIA 9002 USDA BioPreferred Program, 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.

Comply with FSRIA 9002 USDA BioPreferred Program. Refer to <https://www.biopREFERRED.gov/BioPreferred/> for the product categories and BioPreferred Catalog. Selected products must comply with non-proprietary requirements of the Federal Acquisition Regulation, and must meet performance requirements. Provide the following documentation:

USDA BioPreferred label for each product; for bio-based products used on project but not listed with BioPreferred program, provide bio-based content and percentage.

1.6.8 Ozone Depleting Substances

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). Where feasible, use products from U.S. EPA Significant New Alternatives Policy (SNAP) (<https://www.epa.gov/snap>) or meet the criteria of SNAP. Provide the following documentation:

- a. SDS sheets for all refrigerants.
- b. Provide label for each product meeting the cited standards.

1.6.9 Waste Material Management (Recycling - Construction)

NOTE: Military installations are required to redirect at least 60 percent of their non-hazardous solid wastes (including waste from construction and demolition operations) from the waste stream. Verify diversion percentage in Section 01 74 19 CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT.

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

NOTE: Include the bracketed item below when there are additional sustainability requirements, including TPC. TPC optional requirements that align with HPSB requirements are mandatory. Add them as requirements in the following paragraph. Coordinate

language throughout affected UFGSS in this project.

[1.6.10 Additional Sustainability Requirements

1.6.10.1 Validation and Certification Restrictions

Purchase of renewable energy certificates (RECs) specifically to meet project sustainability goals is prohibited.

1.6.10.2 [_____]

]PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 SUSTAINABILITY COORDINATION

NOTE: Choose all 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. The 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 eNotebook[and TPC Online tool].
 - (1) Facility Turnover Meetings: Review Sustainability eNotebook[, and TPC Online submission] for completeness and identify any outstanding issues relating to final documentation requirements.
 - (2) Final Sustainability eNotebook Review

NOTE: Choose the following bracketed option for projects that require the Contractor to obtain the TPC certification. For certifications that include a plaque, include the bracketed phrase for the plaques.

[3.2 THIRD PARTY CERTIFICATION CERTIFICATES OR VALIDATION

Finalize the sustainability certification or validation process and obtain the TPC [Plaque and]Certificate or validation, indicating completion of the projects sustainability goals.

NOTE: Choose the first bracketed sentence and delete the second when the contract documents give specific instruction for placement of the plaque. Delete the first sentence and choose the second sentence when there is no direction in the contract documents, and Contracting Officer has verified if the building occupant wants a framed certificate or validation, and design of framing.

For certification that include a plaque, include the the last bracketed phrase for the plaque.

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

]

3.3 TABLE 3-1 VOLATILE ORGANIC COMPOUNDS (VOC) (LOW EMITTING MATERIALS) REQUIREMENTS

Refer to following table, based on ASHRAE 189.1 section 8.4.2 (Materials), for compliance criteria.

TABLE 3-1 Volatile Organic Compounds (VOC) (Low Emitting Materials) Requirements				
UFGS 01 33 29, Para 1.6.5 Submittal Requirements (Interior Applications Only)				
MATERIAL CATEGORY	EMISSIONS REQUIREMENT		MATERIALS WITH ADDED VOC REQUIREMENT	MATERIAL CATEGORY
Adhesives and Sealants	CDPH/EHLB/Standard method V1.1 (California Section 01350) (Use "office" or "classroom" space limits for all applications)	or	Adhesives (carpet, resilient, wood flooring; panel; primers) Sealants (acoustical; firestop; HVAC Air duct; primers) Caulks	SCAQMD Rule 1168 (Use "other" category for HVAC duct sealant) (for firestop adhesive, UFC 3-600-01 overrides conflicting requirements)
			Aerosol adhesives	Section 3 of Green Seal Standard GS-36 (except: cleaners, solvent cements, and primers used with plastic piping and conduit in plumbing, fire suppression, and electrical systems; HVAC air duct sealants when the application space air temp is less than 40 F (4.5 C)).
Paints and Coatings	CDPH/EHLB/Standard method V1.1 (California Section 01350) (Use "office" or "classroom" space limits for all applications)	or	Flat and nonflat topcoats, primers, undercoaters, and anti-corrosive coatings	Green Seal Standard GS-11

TABLE 3-1 Volatile Organic Compounds (VOC) (Low Emitting Materials) Requirements

UFGS 01 33 29, Para 1.6.5 Submittal Requirements (Interior Applications Only)

MATERIAL CATEGORY	EMISSIONS REQUIREMENT		MATERIALS WITH ADDED VOC REQUIREMENT	MATERIAL CATEGORY
Paints and Coatings	CDPH/EHLB/Standard method V1.1 (California Section 01350) (Use "office" or "classroom" space limits for all applications)	or	Concrete/masonry sealers (waterproofing concrete/masonry sealers), concrete curing compounds, dry fog coatings, faux finishing coatings, fire resistive coatings, floor coatings, graphic arts (sign) coatings, industrial maintenance coatings, mastic texture coatings, metallic pigmented coatings, multicolor coatings, pretreatment wash primers, reactive penetrating sealers, recycled coatings, shellacs (clear and opaque), specialty primers, stains, wood coatings (clear wood finishes), wood preservatives, and zinc primers	California Air Resources Board (CARB) Suggested Control Measure for Architectural Coatings or SCAQMD Rule 1113

TABLE 3-1 Volatile Organic Compounds (VOC) (Low Emitting Materials) Requirements

UFGS 01 33 29, Para 1.6.5 Submittal Requirements (Interior Applications Only)

MATERIAL CATEGORY	EMISSIONS REQUIREMENT		MATERIALS WITH ADDED VOC REQUIREMENT	MATERIAL CATEGORY
Paints and Coatings	CDPH/EHLB/Standard method V1.1 (California Section 01350) (Use "office" or "classroom" space limits for all applications)	or	Basement specialty coatings, high-temperature coatings, low solids coatings, stone consolidants, swimming-pool coatings, tub- and tile-refining coatings, and waterproofing membranes	California Air Resources Board (CARB) Suggested Control Measure for Architectural Coatings
Floor Covering Materials	For carpet, all locations: CDPH/EHLB/Standard Method V1.1 (California Section 01350) or label for Section 9 of CDPH/EHLB/Standard Method V1.1 (California Section 01350)		none	none

TABLE 3-1 Volatile Organic Compounds (VOC) (Low Emitting Materials) Requirements

UFGS 01 33 29, Para 1.6.5 Submittal Requirements (Interior Applications Only)

MATERIAL CATEGORY	EMISSIONS REQUIREMENT		MATERIALS WITH ADDED VOC REQUIREMENT	MATERIAL CATEGORY
<p>Composite Wood, Wood Structural Panel, and Agrifiber Products particleboard medium density fiberboard (MDF) wheatboard strawboard panel substrates door cores no added urea-formaldehyde resins including laminating adhesives for composite wood and agrifiber assemblies</p>	<p>Third-party certification (approved by CARB) of California Air Resource Board's (CARB) regulation, Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products</p> <p>CDPH/EHLB/Standard method V1.1 (California Section 01350) (Use "office" or "classroom" space limits for all applications) (except: Structural panel components such as plywood, particle board, wafer board, and oriented strand board identified as "EXPOSURE 1," "EXTERIOR," or "HUD-APPROVED" are considered acceptable for interior use.)</p>		<p>none</p>	<p>none</p>

TABLE 3-1 Volatile Organic Compounds (VOC) (Low Emitting Materials) Requirements
 UFGS 01 33 29, Para 1.6.5 Submittal Requirements (Interior Applications Only)

MATERIAL CATEGORY	EMISSIONS REQUIREMENT		MATERIALS WITH ADDED VOC REQUIREMENT	MATERIAL CATEGORY
Office Furniture Systems and Seating installed prior to occupancy	ANSI/BIFMA X7.1 ANSI/BIFMA X7.1: (95 percent of installed office furniture system workstations and seating units) Section 7.6.2 of ANSI/BIFMA e3 (50 percent of office furniture system workstations and seating units)		none	none
Ceiling and Wall Systems ceiling and wall insulation acoustical ceiling panels tackable wall panels gypsum wall board and panels wall coverings	CDPH/EHLB/Standard method V1.1 (California Section 01350) (Use "office" or "classroom" space limits for all applications)		none	none

NOTE: Attach completed draft "High Performance and Sustainable Building (HPSB) Checklist" as Attachment 1. This is required for every project. For projects with multiple buildings, attach HPSB Checklist for each building.

Attach completed draft TPC checklist as Attachment 2. This is required when project exceeds threshold defined in note above the paragraph THIRD PARTY CERTIFICATION (TPC) DOCUMENTATION. For projects with multiple buildings, attach completed draft TPC Checklist for each building that requires TPC.

-- End of Section --