

GREEN BUILDING
INITIATIVE'S
INTRODUCTION TO
GUIDING PRICIPLES
COMPLIANCE
ASSESSMENT AND
CERTIFICATION FOR
NEW CONSTRUCTION

GUIDING PRINCIPLES COMPLIANCE FOR NEW CONSTRUCTION (GPC NC)

Introduction

The GPC NC Program

Guiding Principles Compliance for New Construction (GPC NC) is part of the Green Building Initiative's suite of federal government Guiding Principles programs, which also includes [Guiding Principles Compliance for Existing Buildings](#). There are two required stages to every GPC NC assessment and one optional stage, respectively called the 1) Pre-design Assessment, 2) On-site Assessment, and 3) optional Design Review. All of these stages aid the *integrated design team* throughout a new construction or major renovation project. Clients undergoing a GPC NC assessment first complete the GPC NC Survey, which is then reviewed by an assigned third-party assessor during the Pre-design Assessment. This initial assessment is followed by an optional Design Review and a required On-site Assessment, for which the GPC NC Survey must be updated with any design or project changes that occurred after the Pre-Design stage.

Project teams and their projects vary by size, complexity, timing, scheduling, and implementation of the *integrated design and delivery* process. Therefore, the GPC NC process is flexible regarding the timing of the Pre-design Assessment in order to maintain optimal value to the Integrated Design Process Team (*IDP Team*). Projects that exercise integrated design and delivery judiciously and that perform most Value Engineering (VE) early will benefit from a conventionally scheduled Pre-design Assessment. For projects in which VE is delayed until design has progressed significantly and/or for Design-Build projects, the Pre-design Assessment can occur later within the design timeline. The goal is to minimize changes to the design and selection of compliance strategies between the Pre-design Assessment and On-site Assessment. The optional Design Review provides further guidance in ensuring compliance with the Guiding Principles throughout construction.

Additional details regarding the Pre-design Assessment, On-site Assessment, and optional Design Review can be found below.

The Pre-design Assessment Process

The Pre-design Assessment and review typically occurs during the *pre-design phase* of a construction project after the GPC NC Survey & Document Checklist has been completed. When the *IDP Team* has completed the survey and compiled all supporting documents, they submit the survey to GBI, who assigns a third-party assessor to the project. During the Pre-design Assessment, the assessor reviews the completed survey and supporting documentation to verify compliance with the Guiding Principles. The assessor then writes a Pre-Design Report that summarizes the initial findings, provides recommendations for meeting full compliance (if necessary), and identifies any missing documentation that must be made available during the On-site Assessment. The Pre-Design report also provides a projected Guiding Principles Compliance score and rating based on the documentation available. This projected score and rating assumes that all criteria verified during the Pre-design Assessment can be verified during the On-site Assessment when building construction is complete. Turnaround time for the IDP Team to receive the Pre-design Report is contingent upon their completion of the GPC NC Survey & Document Checklist and supporting documentation required for verification. When these items are ready, the Pre-design Report will be completed in approximately 3-4 weeks and sent to the project manager in charge of the construction/renovation project to be shared with the IDP Team.

After reviewing the GPC NC Pre-Design Report, project managers should develop a task list that itemizes any outstanding documentation needed for the On-site Assessment. This follow-up documentation may be submitted to the assessor prior to the site visit in order to expedite the assessment process and allow the assessor to focus on the criteria still needing compliance verification.

The On-site Assessment Process

Between the Pre-Design and On-site Assessments, the Project Manager will complete the design phase, develop the *construction documents*, and manage project construction. When construction is essentially complete—the period prior to ‘Final Acceptance’ and execution of the resulting punch list—the GPC NC Survey & Document Checklist has been updated, and all additional supporting documentation has been compiled, the client will contact GBI to schedule a third-party assessor to perform the On-site Assessment. Whenever possible, GBI will assign the same assessor for both the Pre-Design and On-site Assessments. In the weeks leading up to the site visit, the assigned assessor will contact the Project Manager to discuss the itinerary and specific details of the assessment.

The On-site Assessment normally begins with an introductory meeting in which the assessor can interview the key project personnel as applicable to the building project (see list below):

1. Owner or Owner’s Representative
2. Architect
3. Project Sustainability Coordinator
4. Mechanical Engineer (if different than Energy Engineer)
5. Energy Engineer (if different than Mechanical Engineer)
6. Civil Engineer
7. Structural Engineer
8. Electrical Engineer
9. Commissioning Authority
10. Lighting Engineer
11. Landscape Architect
12. Acoustics Engineer
13. Interior Designer

Afterwards, one or two project personnel guide the assessor on a thorough walk-through of the entire site and building. Smaller projects (< 50,000 square feet) normally require half a day for the full walk-through. Larger projects with multiple space types or those with complex HVAC systems may take one full day or more. Follow-up documentation may be requested during the On-site Assessment and should be sent to the assessor within one week of the site visit.

After the visit, the assessor writes an On-site Assessment Report that summarizes the findings and provides the final Guiding Principles Compliance score and rating. GBI reviews the report and issues the Guiding Principles Compliance certification (if the project meets the 40% minimum threshold). Turnaround time for the On-site Assessment Report is approximately 3-4 weeks, but is dependent upon availability of required documentation and potential updates to the project. After receiving the On-site Assessment Report, the project manager may wish to share the results with the IDP Team.

The Optional Design Review Process

Clients who wish to have a second review of their project prior to construction completion can purchase an optional Design Review for an additional fee. The Design Review process is similar to the Pre-design Assessment process with the exception that the client will submit the completed construction documents to the assessor as part of the additional review.

Using the GPC NC Technical Reference Manual

Green Building Initiative’s (GBI) Guiding Principles Compliance for New Construction (GPC NC) Technical Reference Manual is the primary reference guide for federal clients constructing or renovating a Guiding Principles compliant

building through GBI’s GPC NC program. Used in conjunction with the GPC NC Survey & Document Checklist, this manual is organized according to the ordering of the GPC NC Survey for easy cross-referencing between the two documents.

The GPC NC Technical Reference Manual includes the following:

Guiding Principles for New Construction and Major Renovation

The Guiding Principle for New Construction and Major Renovation appear within this manual in the same order as the [High Performance and Sustainable Buildings Guidance document \(12/1/2008\)](#). In order to clarify all requirements of the Guiding Principles, they have been separated into ‘sub-principles’ wherever necessary.

- **Example:** the On-Site Renewable Energy Guiding Principle has been separated into two sub-principles: Solar Hot Water Heaters and Renewable Energy Generation Projects.

For easier cross-referencing, each Guiding Principle has been numbered according to one of the five topic areas using Roman numerals I – V, letters A – F, and numbers 1 – 5 if there is more than one section to a Guiding Principle.

- **Example:** the first section of the Integrated Design Guiding Principle is I.A.1 Integrated Project Team.

GPC Requirement Tables

Directly following each Guiding Principle is a color-coded table (see Figure 1) that outlines the requirements necessary to meet compliance for its respective Guiding Principle.

There are three types of color-coded requirements (colors in parenthesis):

- **Requirement (pink):** must be accomplished in order to meet compliance for that Guiding Principle.
- **Conditional Requirement (orange):** is required pending certain conditions as specified within the Special Instructions. See Figure 1 for an example of two conditional requirements and the Special Instructions on when they apply.
- **Required as Applicable (purple):** is only required as applicable to the building type, occupancy, *climate zone*, and/or space use.

Figure 1: Example of GPC Requirements Table

	Requirement	Conditional Requirement	Required as applicable
Special Instructions: 3.3.3.1.1 Metering sub-criteria, 3.3.3.1.1.2 (heating fuels) and/or 3.3.3.1.1.3 (steam), are required if natural gas and/or steam are to be used in the facility.			
3.3.3.1.1.1 Metering: electricity	X		
3.3.3.1.1.2 Metering: heating fuels		X	
3.3.3.1.1.3 Metering: steam		X	

Green Globes for New Construction (GG NC) criteria

This technical manual includes strategies, programs, and policies (aka “methods”) from Green Globes for New Construction (GG NC) criteria in order to guide users on how to construct a Guiding Principles compliant building. Each Guiding Principle in the survey and technical manual is followed by a requirements table (described above) outlining the GG NC criteria required to meet full compliance with its associated Guiding Principle. Note that requirements for compliance depend upon the building type, occupancy, and space use of the constructed building; and many Guiding Principles allow for a variety of ways to meet compliance.

The methods (GG NC criteria) listed are numbered as per their listing within the Green Globes for New Construction program. Note that the GG NC criteria are not grouped according to their own ordering, but are listed per the order of the Guiding Principles for which they provide compliance.

- **Example:** the requirement for the first Guiding Principle, I.A.1 Integrated Project Team, is 3.1.1.1.1 Integrated Design Process (IDP).

Building projects may still meet compliance through methods not listed in the GPC NC Survey, but to do so users must enter in all details in column J next to the Guiding Principle(s) in which the unlisted method is meeting compliance. The third-party assessor to the building project will use the Pre-Design Report to confirm whether or not any unlisted methods provide compliance with the Guiding Principles.

ToolTip

The GPC NC Survey & Document Checklist includes pop-up ToolTips to provide guidance for users as they are completing the survey. Each ToolTip has been reprinted within this technical manual below the method for which it is providing guidance.

Guiding Principles Guidance

Wherever necessary, guidance has been provided with additional details for compliance to the respective Guiding Principle.

Assessment Guidance

Specific details have been provided to guide users through how to complete the listed methods in order to meet compliance. Assessment guidance in this technical manual can include tables, calculations, a breakdown on how to complete the item in question, links to outside references, and descriptions of the types of documentation that the third-party assessor will want to see during either the Pre-Design or On-site Assessments.

Reference Material

Many of the Guiding Principles and their associated methods for meeting compliance require an outside reference such as ASHRAE 90.1-2010, the Whole Systems Integrated Process Guide, etc. Where applicable, these references have been listed below the Guiding Principle or GG NC criteria. Additionally, Appendix A: List of Reference Material includes all references in order as they appear within this technical manual.

Supporting Documentation

The majority of criteria within the GPC NC program require documentation to support the claim that a strategy, program, policy, technology, etc. has been utilized to meet a Guiding Principle. A bulleted list of the documentation necessary to verify compliance follows every method within this technical manual.

Definitions

Wherever a word or phrase—such as *integrated design process* or *charrette*—has been italicized, a definition can be found in Appendix C: Definitions towards the back of this technical manual.

The GPC NC Survey & Document Checklist

The GPC NC Survey & Document Checklist is the primary tool for federal clients to construct (or renovate) Guiding Principles compliant buildings through GBI's GPC NC program. The GPC NC Survey includes strategies, programs, and policies (aka "methods") along with minimum requirements to guide clients through meeting full compliance to the Guiding Principles. The GPC NC Survey is used to define if the intent of each Guiding Principle is being met during the pre-design phase of the construction project; followed by a third-party assessor review and verification of compliance. Final verification of the building occurs during the On-site Assessment by the third-party assessor who reviews the actual characteristics of the constructed building.

The GPC NC Survey & Document Checklist includes the following:

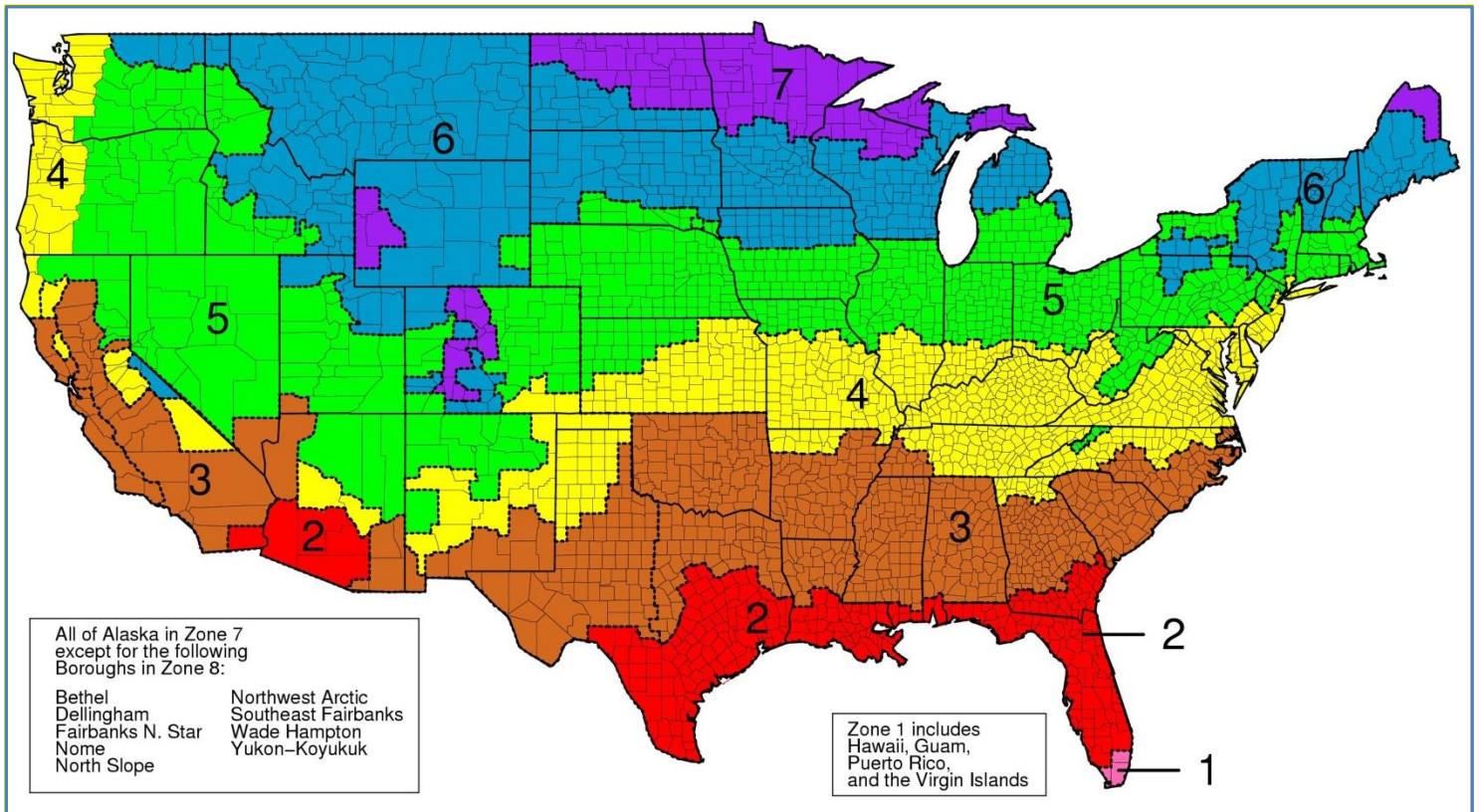
- Guiding Principles for New Construction questions with drop-down answer selections for construction professionals to identify whether or not the project is being built to compliance.
- Strategies, programs, and policies from Green Globes for New Construction (GG NC) that provide the minimum requirements for compliance with the Guiding Principles. There are many ways to construct a GP-compliant building, and the GG NC criteria provide specific methods for every Guiding Principle.
- ToolTips with examples of supporting documentation and guidance for users on how to answer each question.
- Fields to detail and describe all supporting documentation.

Additional Information

Some helpful hints before filling out the GPC NC Survey & Document Checklist:

- To determine which *climate zone* a project is in, reference a Climate Zone map, which can be found in multiple documents, including *ASHRAE 90.1* (Energy Standard for Buildings Except Low-Rise Residential Buildings), the *International Energy Conservation Code (IECC)*, and the *International Green Construction Code (IgCC)*. A simplified version of the map is shown below for reference. If the project's *climate zone* can't be determined from the map, consult the references above for a list of cities and their zones.

Figure 2: ASHRAE Climate Zones map¹



- Items from the “Suggested Documentation” list at the end of each criterion are typical documents that the Assessors will evaluate prior to or in conjunction with the On-site Assessment visit and walk-through to assess compliance, though other documentation may be requested or substituted prior to or during the on-site visit. The more documentation that can be provided to the Assessor prior to the On-site Assessment visit, the more productive the field survey can be.
- The project should incorporate development and simulation of at least one energy model in order to satisfy the Guiding Principles requirements for II. Energy Efficiency. Owners should be aware of this requirement prior to deciding to pursue Guiding Principles Compliance. Provisions should be made with one of the design firms or with an outside consultant to include at least one energy model in their scope of work. The number of iterations and the detail level of the model(s) will need to be determined by the project manager/sustainability consultant based on which criteria will be pursued that require information or results from the energy model(s).
- Detailed guidance can be found at http://www.wbdg.org/references/fhpsb_new.php.

¹ Reprinted from ASHRAE/IES Standard 90.1-2013, © 2013 by ASHRAE. www.ashrae.org/standard901