Green Building Program Manual

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INTRODUCTION

Background and Purpose

In 2012, as part of the Sustainable DC Plan to make the District of Columbia a nationwide leader in sustainability, Mayor Vincent C. Gray issued a directive to the District's Construction Codes Coordinating Board (CCCB)[1] to review, amend and adopt the model 2012 International Codes as published by the International Code Council (ICC). On March 28, 2014, the District officially adopted the 2013 District of Columbia Construction Codes, comprised of the 2012 International Codes and the 2013 DC Construction Codes Supplement[2]. Included in the 2013 DC Construction Codes are the District of Columbia Green Construction Code (GCC) and Energy Conservation Code (ECC), comprised of the 2012 IgCC and IECC, as modified by the 2013 Construction Codes Supplements (12 DCMR K and 12 DCMR I). [3] These codes incorporate many local sustainable, energy- and water-efficient building best practices as mandatory requirements, giving the District one of the greenest construction codes in the country. The codes also extend the green building practices legislated by the District of Columbia Green Building Act of 2006 (GBA).[4]

The 2013 DC Construction Codes take into account the recommendations of a broad range of stakeholders and building industry professionals who participated as voting and non-voting members of the Technical Advisory Groups (TAG), as well as three public comment periods. With the TAG's input, the CCCB concluded that the new codes largely reflect sustainability practices that are already being implemented voluntarily by District commercial developers and building owners as a result of competitive market forces. According to many building industry professionals many of the new requirements are achievable by the building industry without significant additional cost, and will result in energy and water savings as well as a greener and healthier city environment.

The District Department of Consumer and Regulatory Affairs (DCRA) is responsible for enforcing the GCC and ECC. The primary focus of the Green Building Program Manual (GPBM or "Manual") is to give an overview of DCRA's enforcement process for the GCC, ECC, and the GBA, as well as provide guidance and educational resources to the public to aid in compliance with the codes and the GBA. It should be emphasized that other codes and regulations in the District are relevant to green building, energy conservation and sustainability practices, including building-related activities regulated or administered by the District's Department of the Environment (DDOE).[5]

Overview of Manual

Green construction codes are a relatively new concept within the building industry. Many jurisdictions, builders, architects, developers, and contractors, have minimal experience in applying them. Additionally, the new energy codes continue to be strengthened, requiring significant advances in building construction. For these reasons, the District's pioneering adoption of the new green and energy codes will require extra support and guidance to help the building industry successfully design and build to these codes.

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[1] Information on the CCCB can be found at http://dcra.dc.gov/node/513992
[2] Published as Title 12 of the District of Columbia Municipal Regulations (DCMR), can be accessed online at http://www.dcregs.dc.gov/Notice/NoticeListForPublic.aspx?type=Issue&CategoryName=Final%20Rulemaking&IssueID=486
[3] The 2012 IgCC and IECC model codes can be accessed online at: http://publicecodes.cyberregs.com/icod/
[4] Effective March 8, 2007 as amended (D.C. Law 16-234; D.C. Official Code § 6-1451.05 (2012 Supp.))
[5] Find the District Department of the Environment online at: http://ddoe.dc.gov/

The goal of this manual is to provide guidance and information relating to DCRA steps and regulatory procedures, in order to assist the public in interpreting and complying with the relevant green building and energy conservation laws and regulations. To make the process easy to follow, the Manual is laid out to match the typical timeline of a building project:

1. Design Phase
2. Permitting Process
3. Building Inspections
4. Certificate of Occupancy
5. Post-Occupancy
6. Enforcement

The GBPM will be officially published in the D.C. Register, and become effective upon publication. The GBPM is meant to be a living document and guide to assist in complying with the GCC and ECC. It will identify processes, links between green programs, submittal forms needed, and other information to ensure compliance with the codes. The fields of green building and energy efficiency are evolving daily and new and better products, processes and technologies are being applied toward the goal of lower impact built environments. To this end, as new information is shared with and evaluated by DCRA, the GBPM will be updated quarterly and released as an Administrative Bulletin on the Green Building Division website[6] to help guide project teams toward the current best practices in greening their projects consistent with legal and regulatory requirements.

The GBPM is not intended to be a substitute or replacement for District laws and regulations, and those sources should be consulted for the specific legal requirements applicable to the construction process. The GBA, GCC and ECC will be among the many green building-related regulations in the District, including the DDOE's Stormwater Guidelines, Green Area Ratio, and others. Many of these laws and regulations cross over multiple District agencies sharing in their development and enforcement. Although the new programs will transform the District's built environment for the better, there will be a learning curve for members of the building industry and it is imperative that they have a central informational source that will point them in the right direction as they navigate through the new requirements.

[6] http://dcra.dc.gov/service/green-building

DESIGN PHASE

It is critical when a construction project is in early conceptual design phases, that potential green building requirements are considered and integrated where required. This section provides guidance to assist property owners and developers in determining which legal and regulatory framework applies to their project.

Applicability of DC Green Building Requirements

The primary District of Columbia statutes and regulations related to green building and energy efficiency administered through DCRA are set forth in the following documents:

1. 2013 District of Columbia Building Code (BC) (consisting of the 2012 International Building Code as amended by the 2013 District of Columbia Building Code Supplement, 12 DCMR A)[7]
2. 2013 District of Columbia Energy Conservation Code (ECC) (consisting of the 2012 International Energy Conservation Code as amended by the 2013 District of Columbia Energy Conservation Code Supplement, 12 DCMR I)
3. Green Building Act (and implementing regulations set forth in Chapter 3, 12 DCMR K)[8]
4. 2013 District of Columbia Green Construction Code (GCC) (consisting of the 2012 International Green Construction Code as amended by the 2013 District of Columbia Green Construction Code Supplement, 12 DCMR K)

The construction codes often refer to practices and other matters that are acceptable when "approved by the Code Official." In the GCC, for example, there are references to an "approved agency" who may undertake commissioning. The current lists of what is considered approved can be found in the Reference Guide by code section number. To seek Code Official approval of a new process, a request should be submitted to the Code Official with sufficient documentation.

2013 DC Building Code

The 2013 District of Columbia Building Code (BC) consists of the 2012 edition of the International Building Code (IBC) published by the ICC, as amended by the 2013 District Construction Codes Supplement[9]. Chapter 1 of the Building Code contains detailed provisions regarding the scope, administration and enforcement of all of the Construction Codes (with the exception of the Fire Code and the Property Maintenance Code). It should be referred to for legal guidance regarding issues such as:

1. Applicability and Scope of the Green Construction Code (Section 101.4.9.4)
2. Applicability and Scope of the Energy Conservation Code (Section 101.4.9.3)
3. Duties and Powers of Building Official (Section 104)
4. Permitting Process (Section 105)
5. Inspection Process (Section 109)
6. Certificates of Occupancy (Section 110)
7. Appeals (Section 112)
8. Transitory Provisions (Section 123)

[7] As discussed below, certain projects may be covered by the 2008 District of Columbia Construction Codes.
[8] D.C. Official Code §6-1451.05 (2012 Supp.)
[9] Published as Title 12 of the District of Columbia Municipal Regulations (DCMR), can be accessed online at http://www.dcregs.dc.gov/Notice/NoticeListForPublic.aspx?type=Issue&CategoryName=Final%20Rulemaking&IssueID=486

2013 DC Energy Conservation Code

The 2013 District of Columbia Energy Conservation Code (ECC) consists of the 2012 edition of the International Energy Conservation Code (IECC) published by the ICC, as amended by the 2013 District Construction Codes Supplement (12 DCMR I, Energy Conservation Code Supplement), and is an update to the 2008 District Energy Conservation Code. The 2013 ECC will produce a building that is significantly more energy efficient than a building built under the 2008 ECC.

Subject to certain provisions as more fully detailed below, or unless specifically excepted, the ECC applies broadly to all residential and commercial buildings, the building sites, and associated systems and equipment. The ECC regulates the design and construction of buildings for the effective use and conservation of energy over the useful life of each building. The ECC provides flexibility to use innovative approaches and techniques to achieve this objective. The ECC is not intended to abridge safety, health or environmental requirements contained in other applicable codes or ordinances.

As set forth in the Building Code,[10] residential buildings[11] shall meet the residential provisions and commercial buildings shall meet the commercial provisions of the ECC. Determine if a project must comply with the ECC using the following documents:

- Chapter 1 of the 2013 Building Code, 12 DCMR A[12]
- Energy Conservation Code Self-Selection Guide[13]

A summary of the applicability of the ECC is as follows[14]

1. Existing buildings not completing work requiring a permit and lawfully in existence at the time of the adoption of the code will not be required to be removed, altered, or abandoned
2. Historic Buildings listed in the District or National Register of Historic Places where compliance will cause the loss of irretrievable historic components that may lead to the de-listing of the building as certified by the Historic Preservation Office or the Keeper of the National Register of Historic Places shall be exempt from the ECC
3. Additions, alterations, renovations or repairs to an existing building, building system or portion thereof shall conform to the provisions of the ECC as they relate to new construction without requiring the unaltered portion(s) of the existing building or building system to comply with this code
4. Spaces undergoing a change in occupancy that would result in an increase in demand for either fossil fuel or electrical energy shall comply with the ECC
5. Any non-conditioned space that is altered to become conditioned space shall be required to be brought into full compliance with the ECC
6. Where a building includes both commercial and residential occupancies, each occupancy shall be separately considered and meet the applicable provisions of the code
7. Specified buildings, or portions thereof, separated from the remainder of the building by building thermal envelope assemblies complying with the ECC shall be exempt from the building thermal envelope provisions of the ECC:

[10] Chapter 1, Section 101 of the 2013 Building Code, 12 DCMR A

[11] Per the 2012 IECC, Residential Buildings includes detached one- and two-family dwellings and multiple single-family dwellings (townhouses) as well as Group R-2, R-3 and R-4 buildings three stories or less in height above grade plane.

[12] Published as Title 12 of the District of Columbia Municipal Regulations (DCMR), can be accessed online at http://www.dcregs.dc.gov/Notice/NoticeListForPublic.aspx?type=Issue&CategoryName=Final%20Rulemaking&IssueID=486

[13] Appendix: Energy Conservation Code Self-Selection Guide

[14] This list is intended as a summary; please refer to the Building Code, Section 101.4.7 and the ECC for further details

a. Buildings, or portions thereof, with a peak design rate of energy usage less than 3.4 Btu/h ft^2 (10.7 W/m^2) or 1.0 watt/ft^2 (10.7 W/m^2) of floor area for space conditioning purposes
b. Buildings, or portions thereof, that do not contain conditioned space

The following need not comply with the ECC provided the energy use of the building is not increased:[15]

1. Storm windows installed over existing fenestration
2. Glass only replacements in an existing sash and frame
3. Existing ceiling, wall or floor cavities exposed during construction, provided that these cavities are filled with insulation
4. Construction where the existing roof, wall or floor cavity is not exposed
5. Re-roofing where neither the sheathing not insulation is exposed. Roofs without insulation in the cavity and where the sheathing or insulation is exposed during the re-roofing shall be insulated either above or below the sheathing
6. Replacement of existing doors that separate conditioned space from the exterior
7. Alterations that replace less than 50 percent of the luminaires in a space, as long as such alterations do not increase the installed interior lighting power
8. Alterations that replace only the bulb and ballast within the existing luminaires in a space, as long as such alterations do not increased the installed interior lighting power

If the project is required to comply with the ECC, project teams may select to comply following a prescriptive or performance pathway under the ECC or ASHRAE 90.1-2010 (commercial projects only). If you have determined your project must comply with the ECC requirements, use the procedural guidance found in the following chapters of this GBPM.

Green Building Act

The Green Building Act (GBA) contains high-performance building standards on certain public and private projects, and in some circumstances requires financial security to ensure compliance with the Act's requirements. The 2013 GCC includes regulations implementing the GBA,[16] and the 2008 Building Code[17] includes parallel regulations for projects constructed under that code. If a project falls within the scope of the GBA, and associated regulations, compliance with the GBA and regulations will be deemed compliance with the 2013 GCC.

Projects subject to the GBA include the following:[18]

1. Public Projects. A project that is new construction or a substantial improvement and, is either: a District-owned or District instrumentality-owned project, or a District financed or District instrumentality-financed project, where the financing represents at least 15 percent of the project's total cost. These include:
    a. Project of Educational Group E occupancy
    b. Project containing Residential occupancies containing 10,000 square feet (929 m^2) or more of gross floor area[19]

[15] Chapter 1, Section 101.4.7.5.3 of the 2013 Building Code, 12 DCMR A
[16] Chapter 3, Section 302 of the 2013 Green Construction Code, 12 DCMR K
[17] Chapter 13 of the 2013 Building Code, 12 DCMR A
[18] This is intended to provide a summary. Please refer to the GBA and associated regulations in Chapter 3 of the 2013 GCC or Chapter 13 of the 2008 Building Code, if applicable, for more detail. Definitions of specific terms can be found in Chapter 2 of the 2013 GCC and Chapter 2 of the 2008 Building Code.
[19] Chapter 1, Section 199 of the Zoning Code, 11 DCMR

c. Interior construction of at least 50,000 contiguous square feet (4645 m^2) of gross floor area of a mixed use space where residential occupancies exceed 50% of the project
d. Interior tenant fit-out alteration involving the alteration of 30,000 square feet (278[7] m^2) or more of gross floor area
e. Interior tenant fit-out in new construction involving spaces of 30,000 square feet (2787 m^2) or more of gross floor area
f. Other Non-residential projects; projects not described above, and with less than 50% of gross floor area containing residential occupancies

2. Private Projects. A project that is new construction or a substantial improvement and is (a) privately owned; (b) involves improved and unimproved real property acquired by sale from the District or a District instrumentality to a private entity; unimproved real property leased from the District or a District instrumentality to a private entity; or (c) less than 15 percent of the project's total project cost, but some portion of the project, is District financed or District instrumentality financed. These include:
    a. Privately-owned non-residential projects of 50,000 square feet (4645 m^2) or more of gross floor area
    b. Interior construction of a mixed use space at least 50,000 contiguous square feet (4645 m^2) of gross floor area in a Residential project

Determine if the project is required to comply with the Green Building Act (GBA) using the following documents as guidance:

- The Green Building Act of 2006 as amended[20]
- Chapter 13A of the 2008 Building Code[21] as amended[22]
- Chapter 3 of the 2013 Green Construction Code[23]
- Green Building Act Self-Selection Guide[24]

If the project is required to comply with the GBA, it will be considered to have met the requirements of the Green Construction Code (GCC), and is not required to comply with the GCC in addition to the GBA. Projects subject to the GBA may be subject to fines for non-compliance and private sector projects that fall within the Act are required to submit financial security at the time of filing an application for a Certificate of Occupancy. More information on this financial security requirement can be found below under "Certificate of Occupancy".

If the project is not required to comply with the Green Building Act, then proceed to determine if it is required to comply with the Green Construction Code.

Projects subject to the GBA may request an exemption[25] from the Director of District Department of the Environment (DDOE). The burden will fall on the applicant to show good cause why their project cannot to meet the requirements of the GBA. Projects seeking exemption will be required to submit documentation which may include but will not be limited to:

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[20] Effective March 8, 2007 as amended (D.C. Law 16-234; D.C. Official Code § 6-1451.05 (2012 Supp.))
[21] Published as Title 12 of the District of Columbia Municipal Regulations (DCMR), can be accessed online at http://www.dcregs.dc.gov/Notice/NoticeListForPublic.aspx?type=Issue&CategoryName=Final%20Rulemaking&IssueID=486
[22] Amendments to the Chapter 13 of the 2008 Building Code include the following: Final Rule Making: June 21, 2013;Emergency Rulemaking: August 2013;Emergency Rulemaking: September 2013
[23] Published as Title 12 of the District of Columbia Municipal Regulations (DCMR), can be accessed online at http://www.dcregs.dc.gov/Notice/NoticeListForPublic.aspx?type=Issue&CategoryName=Final%20Rulemaking&IssueID=486
[24] Appendix: Green Building Act Self-Selection Guide
[25] Chapter 35, Section 3511 of 20 DCMR and D.C. Official Code §6-1451.10 (2012 Supp.)

1. Substantial evidence of a practical infeasibility or hardship in meeting a required green building standard
2. A determination that the public interest would not be served if the applicant had to comply with the requirement
3. LEED certification is not available for the building type that is subject to the Act's requirements
4. Documentation that the building subject to the Act's requirements is and will remain unoccupied
5. Documentation that the building will be temporary
6. An explanation of the need for the building
7. Any other information requested by the Director of DDOE

All applications for exemption shall be submitted, through DDOE, to the Green Building Advisory Council (GBAC) for comments and recommendations. The GBAC's comments and recommendations shall be provided to DDOE within 30 days of the date of submission.

2013 DC Green Construction Code

The 2013 District of Columbia Green Construction Code (GCC) consists of the 2012 edition of the International Green Construction Code (IgCC) published by the ICC, as amended by the 2013 District Construction Codes Supplement (12 DCMR K, Green Construction Code Supplement). The GCC provides an approach to design and construction that conserves resources, including energy, materials and water, and a healthier indoor environment.

Subject to certain transition provisions for projects underway at the time the 2013 Codes were adopted, as more fully detailed below, or unless specifically excepted, the GCC applies to the design, construction, addition, alteration, change of occupancy, relocation, replacement, repair, equipment, building site, maintenance, removal, razing, demolition of (a) every building or structure; (b) appurtenances connected or attached to such buildings or structures; and (c) the site on which the building or structure is located. Exceptions include the following:

1. New construction, including construction of an addition, of less than 10,000 square feet (929 m^2) of gross floor area[26]
2. Alterations where the aggregate area of construction or renovation is less than 10,000 square feet of gross floor area
3. Demolition or razing of less than 10,000 square feet (929m^2) of gross floor area
4. Relocation of structures of less than 10,000 square feet (929 m^2) of gross floor area
5. Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories in height above grade plane with a separate means of egress, their accessory structures, and the site or lot upon which these buildings are located
6. Group R-3 residential buildings, their accessory structures, and the site or lot upon which these buildings are located
7. Group R-2 and R-4 residential buildings three stories or less in height above grade plane, their accessory structures, and the site or lot upon which these buildings are located
8. Equipment or systems that are used primarily for industrial or manufacturing
9. Temporary structures approved under Section 3103 of the Building Code

[26] Chapter 1, Section 199 of the Zoning Code, 11 DCMR

If a proposed building activity is determined to be subject to the GCC, a determination will need to be made as to which of the potentially applicable compliance paths will be elected. The compliance path elected will determine the specific regulatory requirements applicable to the building activity.

Determine if the project must comply with the Green Construction Code (GCC) using the following documents:

- Chapter 1 of the 2013 Building Code, 12 DCMR A[27]
- Green Construction Code Self-Selection Guide[28]

If the project is within the scope of the GCC, determine if you will elect to use the code or one of the four alternative compliance pathways:[29]

1. ASHRAE 189.1-2011
2. Enterprise Green Communities Certified
3. LEED at the Certified Level or higher
4. National Green Building Standard (ICC 700) at the Bronze Level or higher, and ENERGY STAR New Homes or Multifamily High-Rise Certification

New Construction or Level 3 Alterations projects that choose to comply with the GCC itself must also comply with Appendix A.[30] Once a compliance path (GCC or others as listed above) is selected, the project has committed to completing the project under the chosen pathway and is required to complete all steps necessary to prove compliance, including full certification if applicable. If a project is seeking to follow an alternate compliance pathway, a full determination should be made before permit to ensure that the completed project will be eligible for certification under that pathway. Projects that do not complete the requirements of their chosen pathway will be subject to infractions and fines.[31]

If you have determined the project must comply with the GBA or the GCC requirements, the procedural guidance found in the applicable chapters of this GBPM should assist in understanding and complying with these requirements.

Transitory Provisions[32]

Projects that are already engaged in development, design or construction when the 2013 Construction Codes are adopted may be permitted to continue development under the 2008 Construction Codes.[33] Projects at the following stages should refer to the appropriate section of the Building Code for guidance:

1. Existing Valid Permits (Section 123.1.1)
2. Existing Filed Application (Section 123.1.2)
3. Existing Design Contracts (Section 123.1.3)
4. Tenant Layout Permits (Section 123.1.4)

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[27] Published as Title 12 of the District of Columbia Municipal Regulations (DCMR), can be accessed online at http://www.dcregs.dc.gov/Notice/NoticeListForPublic.aspx?type=Issue&CategoryName=Final%20Rulemaking&IssueID=486

[28] Appendix: Green Construction Code Self-Selection Guide

[29] Chapter 1, Section 101.4.9.4 of the 2013 Building Code, 12 DCMR A

[30] Submittal Forms: Project Elective Checklist. New Construction Projects are required to have 15 project electives, Level 3 Alterations 13 project electives, all others are not required to seek electives at this time.

[31] Title 16 of the District of Columbia Municipal Regulations (DCMR)

[32] Chapter 1, Section 123 of the 2013 Building Code, 12 DCMR A

[33] If the project falls within the scope of Section 123, all associated regulations of the 2008 Construction Codes are still applicable, including but not limited to the 2008 Building Code and Energy Conservation Code.

The Transitory Provisions only apply to the D.C. Construction Codes, and do not apply to the Green Building Act.

Requests for Determination

If you have a question, would like guidance on issues of applicability of the green building-related regulations and codes, or would like an official determination for the requirements of your project, contact the Green Building Program at DCRA using Subject Line: "Request for Determination by the Code Official" at green.building@dc.gov. Project teams will be required to submit the Green Determination Request[34], including all exhibits to get a complete determination. Incomplete requests will be returned without determination.

All green building determinations will be required to come through the Green Building Program at DCRA who will present it to the Chief Building Official for final determination.

[34] Appendix: Green Determination Request

Preliminary Design Review Meetings

Overview

DCRA offers Preliminary Design Review Meetings (PDRM) to customers for a fee. PDRM's are meetings scheduled by owners, developers and contractors to review building plans for code compliance prior to submission for building permits as a service of the DCRA. PDRM's can be scheduled for individual trades, or for full plan review, and can include DCRA, DDOT, DDOE and WASA. These meetings are generally scheduled to review large scale projects however the meetings are not limited by job size. PDRM's are not mandatory, but can be very helpful in expediting development of a project. Green reviews are incorporated into the current PDRM structure.

PDRM Process

To request a PDRM, contact the PDRM Coordinator, Toni Taylor, at toni.taylor@dc.gov and provide the following information:

- contact name,
- name of the firm or entity requesting the meeting,
- phone number,
- email address,
- scope of work being performed, and
- gross square footage of the project.

The applicant will be given the next available date on the PDRM calendar. PDRMs are held once a week. Each meeting will last approximately 90 minutes.

No later than 10 business days prior to the month in which the meeting is to take place, the applicant will be required to submit a brief narrative overview and agenda to Ms. Taylor outlining the topics that will be covered during the meeting. Based on the agenda, DCRA may invite other agencies to participate (e.g. DDOT, DDOE, and WASA) if there are topics in the agenda which are under their purview. DCRA will send payment documents and a confirmation of the PDRM date by email at least five business days before the meeting.

Applicant must pay the required PDRM fee[35] before the meetings begin, and provide evidence of payment. The customer is given 3 copies of the Soar Revenue Receipt and the Standard Deposit Ticket and directed to the Cashier on the second floor. The customer brings back stamped copies of the Standard Deposit Ticket and is given one copy for their records.

If a PDRM is held, the meeting sign-in sheet, agenda, and meeting noted recoded by DCRA will be attached to the project in the DCRA database once the permit application has been submitted.

During the PDRM, the developer can decide whether to retain a third-party inspection agency to comply with inspection requirements in accordance with the District's third-party Inspection program.

[35] Fees are based upon the scale as outlined in DCMR 12, Appendix A (Building Permits).

Green Review Meeting

Overview

Outside of the PDRM's, an optional one-on-one green review meeting with a representative from the DCRA Green Building Program is also available at no cost for owners, developers and contractors. During the meeting the project representative and DCRA would further discuss their project and review for compliance with the green construction code, energy conservation code, and/or Green Building Act. To schedule a green review meeting, please contact the DCRA Green Building Program at green.building@dc.gov.

Green Review Process

To request a Green Review Meeting, contact the Green Building Division at green.building@dc.gov and provide the following information:

- contact name,
- name of the firm or entity requesting the meeting,
- phone number,
- email address,
- scope of work being performed,
- gross square footage of the project
- questions/agenda for meeting

The applicant will be given the next available date on the Green Review calendar. Green Review meetings will be scheduled once per week. Each meeting will last approximately 60-90 minutes.

If a Green Review Meeting is held, the meeting sign-in sheet, agenda, and meeting notes recoded by DCRA will be attached to the project in the DCRA database once the permit application has been submitted.

PERMITTING PROCESS

Whether a property owner is altering a structure, putting up a fence, building a house, or installing certain equipment the owner is responsible for getting the right permits from DCRA before work starts. DCRA classifies permits into various categories, depending on the work involved.[36]

The DCRA Permit Center opens at 8:30 am Monday, Tuesday, Wednesday and Friday, at 9:30 Thursday, and closes at 4:30 pm daily. Customers can begin the permitting process until 3:30 pm, and will receive a ticket indicating the customer's place in the processing queue. Every effort is made to process all tickets the same day. If not, the process will be completed the following business day. The complexity of the permitting process depends on the size and scale of the proposed project, and can involve other agencies besides DCRA. If you are ready to get started, you can start your permit application online at: http://cpms.dcra.dc.gov/OCPI/PermitMenu.aspx

Overview

Green and Energy Plan Reviews

Green and Energy plan reviews are integrated into the standard permit application and review process. When you come through intake at the DCRA Permit Center, your application will be processed and assigned the appropriate green and energy code plan reviews. During the Green Plan Review, the Green Plan Reviewer verifies the provided plans and documentation are sufficiently complete. The Energy Plan Review for compliance with the ECC is integrated into the other plan reviews (e.g. electrical and mechanical plan review).

Third-Party Green Plan Reviews

Currently, DCRA does not offer third-party green plan reviews for the GCC or GBA. However, third-party plan reviewers will be responsible to review for compliance with the ECC based on their respective plan reviews. For example, mechanical plan reviewers will review the mechanical plans to ensure the mechanical system is in compliance with the ECC.

For more information on the Third-Party Plan Review Program, please review the DCRA Third-Party Plan Review Manual.[37]

Permitting Process

Before coming to the Permit Center, the Customer should…

1. Using the GBA, GCC, ECC, and the self-selection guides, determine what green and energy efficiency regulations are applicable to your project
2. Fill out online permit application, including the applicable green building questions at: http://cpms.dcra.dc.gov/OCPI/PermitMenu.aspx
3. Print the application and complete the required signatures
4. Keep the permit intake tracking number you received online

[36] Chapter 1 of the Building Code, 12 DCMR A
[37] http://dcra.dc.gov/service/permits-third-party-plan-review-program

Intake[38]

1. Customer brings the completed application along with the plan drawings and supporting documentation to the DCRA Permit Center, located on the 2nd floor of 1100 4th Street SW, Washington DC 20024, and present it to the Intake staff at the Infodesk for processing
2. Infodesk staff will give you:
    a. A Q-matic number, please listen for your number to be called
    b. Supplemental forms to complete. If you prefer, you can find these forms online and fill them out before coming to DCRA: http://dcra.dc.gov/publication/building-permit-application-forms-package
3. Once your Q-matic number is called, a DCRA Plan Review Coordinator will:
    a. Review the permit application and documentation to make sure customer has all of the appropriate forms and documents to continue
    b. Determine if the project is a walkthrough or file job
    c. Review the application and assign the mandatory plan reviews to be completed
    d. Update the existing project application record as necessary

Green Plan Review (completed by the Green Plan Reviewer)

1. Confirm which path the project is required to comply with and that they have the required documents[39]
2. Review the project plans, specifications, and other documentation as applicable
3. If project requires additional information to complete the review: mark the project as "hold for comments" in the online permit application
4. Once all necessary information is submitted in compliance with the codes: approve plans

Building Permit Issuance

1. Once all other assigned reviews are completed and approved, the customer is given notice that project is ready for permit issuance
2. Customer comes to Infodesk at DCRA
3. Customer is given an invoice, pays at the cashier's desk
4. Building permit is issued

Project Submittal Documents

Project documents, include construction drawings and supporting documents in sufficient detail to show compliance, must be submitted with all permit applications.[40] These documents enable DCRA to determine whether the project complies with the applicable Construction Codes. This section sets forth the additional submittals required to determine compliance with the GBA, GCC and ECC for those projects subject to specific requirements.

Commencing March 28, 2014 with the adoption of the 2013 DC Construction Codes a timeline for submitting construction documents and all other supporting documents electronically will expand in three month increments on the following schedule:

[38] If using the Development Ambassador Service (DAP) or a Third Party Reviewer, your process may be slightly altered. Please visit the DCRA website for more information on these programs.

[39] Submittal Forms: Instructions and Overview and Submittal Checklist

[40] Chapter 1, Section 106 of the 2013 Building Code, 12 DCMR A

- June 28, 2014: Projects of 100,000 sqft or more
- September 28, 2014: Projects of 75,000 sqft or more
- December 28, 2014: Projects of 50,000 sqft or more
- March 28, 2015: All projects[41]

Building Permit Submittals[42]

All Projects

1. Complete the Online Building Permit Application
2. Building permit types under this section include
    a. New Building
    b. Addition
    c. Addition Alteration and Repair
    d. Alteration and Repair
    e. Tenant Layout
3. Submit plans and supporting documents to show compliance with the ECC including but not limited to:
    a. Design criteria, exterior envelope component materials, insulation materials and their R-values
    b. Fenestration U-factors and SHGCs
    c. Area-weighted U-factor and SHGC calculations; mechanical system design criteria
    d. Mechanical and service water heating system and equipment types, sizes and efficiencies
    e. Economizer description; equipment and system controls
    f. Fan motor horsepower and controls
    g. Duct sealing, duct and pipe insulation and location
    h. Lighting fixture schedule with wattage and control narrative
    i. Air sealing details

    TIP: REScheck and COMcheck tools[43] are an acceptable method to comply with the residential and/or commercial requirements of the ECC

If compliance with the Green Building Act, Green Construction Code or alternative compliance pathway is required, submit the following additional information, as applicable

Projects Subject to Green Building Act

1. Submit ENERGY STAR Target Finder report demonstrating the project is designed to achieve 75 points or greater on the EPA Energy Performance Rating scale[44]
2. Document all mandatory requirements in the submitted Construction Documents
3. Compliance Path Documentation (choose one of the following):
    a. LEED Projects (one of the following)
        i. If certifying with Green Building Certification Institute (GBCI): Grant read-only access to the project's LEED Online Account[45]

[41] Exception: projects exempted from seal requirements
[42] Submittal Forms: Project Overview and Submittal Checklist
[43] Available online from the U.S. Department of Energy at http://www.energycodes.gov/compliance/tools
[44] If applicable: projects 10,000 square feet or more of gross floor area, and is a building type available through the ENERGY STAR Target Finder Tool: https://www.energystar.gov/index.cfm?fuseaction=target_finder

ii. If requesting verification by DCRA or a DCRA-Approved Third-Party:[46]

- Submit a formal request[47] to DCRA to use DCRA or a DCRA-approved third-party to review for compliance
- Submit Preliminary LEED Scorecard
- DCRA will arrange a formal meeting to review next steps

b. Enterprise Green Communities Projects (one of the following)

i. If certifying with Enterprise:

- Submit the Prebuild Approval Notification from Enterprise
- Grant access to the project's online Enterprise Online Account[48]

ii. If requesting verification by DCRA

- Submit a formal request to use DCRA GPR to review for compliance [49]
- Submit a copy of the Enterprise "Intended Methods" checklist
- Submit energy model demonstrating compliance with the appropriate energy performance path, or a signed statement demonstrating compliance with the appropriate energy prescriptive path
- DCRA will arrange a formal meeting to review next steps

4. Complete and Submit applicable sheets from the Submittal Documents:[50]
    a. Project Overview
    b. Submittal Checklist

Projects Subject to Green Construction Code

1. Document all mandatory requirements in the submitted Construction Documents
2. Complete and Submit applicable sheets from the Submittal Documents:[51]
    a. Project Overview
    b. Submittal Checklist
3. Applicable documents based on the projects compliance path selection below

Green Construction Code

1. Complete and Submit applicable sheets from the Submittal Documents:[52]
    a. IgCC Energy Performance Path
    b. IgCC Energy Prescriptive Path
    c. Commissioning Requirements
    d. Commissioning Plan
    e. Project Elective Checklist
2. Optional Review Materials for Submittal
    a. Initial Material Selection choices
    b. Construction Waste Management Plan

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[45] The Green Division LEED Online Account is under Green Building DCRA, green.building@dc.gov
[46] Chapter 3, Section 302.5.1 of the 2013 Green Construction Code, 12 DCMR K
[47] Appendix: DCRA Compliance Review Request
[48] The Green Division Enterprise Online Account is under Green Building DCRA, green.building@dc.gov
[49] Chapter 3, Section 302.5.1 of the 2013 Green Construction Code, 12 DCMR K
[50] Appendix: Submittal Forms
[51] Appendix: Submittal Forms
[52] Appendix: Submittal Forms

ASHRAE 189.1

1. Document all mandatory requirements in the submitted Construction Documents
2. Complete and submit applicable sheets from the Submittal Checklist:[53]
    a. ASHRAE Energy Performance Path
    b. ASHRAE Energy Prescriptive Path

LEED

1. Grant read-only access to the project's LEED Online Account[54]

Green Communities

1. Submit the Prebuild Approval Notification from Enterprise
2. Grant access to the project's online Enterprise Account[55]

National Green Building Standard/ICC 700

1. Submit the NGBS Scoring Spreadsheet[56], Project ID and contact information for the NGBS Verifier
2. Submit one of the following to show compliance with the ENERGY STAR New Homes or ENERGY STAR Multifamily High-Rise Program
    a. Energy model with a preliminary HERS Score satisfying the ENERGY STAR Target Score for ENERGY STAR New Homes
    b. Energy model demonstrating a 15% improvement over ASHRAE 90.1-2007 (ES MFHR)
    c. A signed letter by project team members, including but not limited to owner and architect, indicating project is designed to applicable Prescriptive Path

Demolition or Razing Permit Submittals

Projects Subject to the Green Construction Code

1. Complete Online Demolition or Raze Application
2. Provide plans and supporting documents to show compliance with relevant chapter of the GCC, including, but not limited to, building site waste management requirements (Chapters: 4 Site Development and Land Use; 5 Material and Resource Conservation)
3. Complete and Submit applicable sheets from the Green Construction Code Submittal Checklist:[57]
    a. Project Overview
    b. Submittal Checklist
4. Provide date for/schedule final inspection of demolition or raze

Alternate Compliance Paths

Demolition and Razing projects are not eligible for ASHRAE 189.1, LEED, Green Communities or ICC 700 certification and are therefore not eligible for an alternate compliance path and are required to comply with the Green Construction Code.

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[53] Appendix: Submittal Forms

[54] The Green Division LEED Online Account is under Green Building DCRA, green.building@dc.gov

[55] The Green Division Enterprise Online Account is under Green Building DCRA, green.building@dc.gov

[56] NGBS Scoring Spreadsheet can be found online at:
http://www.homeinnovation.com/services/certification/green_homes/resources/ngbs_green_scoring

[57] Appendix: Submittal Forms

Site Work Permit Submittals

Projects Subject to the Green Construction Code

1. Complete Online Site Work Permit Application
2. Site work permit types under this section include:
    a. Civil Site Work Only
    b. Excavation Only
    c. Fence
    d. Foundation Only
    e. Garage
    f. Retaining Walls
    g. Sheeting and Shoring
    h. Swimming Pool
    i. Underground Storage Tank
    j. Water and Damp Proofing
3. Provide plans and supporting documents to show compliance with the relevant green building construction practices as required by the GCC (Chapter 4 Site Development and Land Use)
4. Complete and Submit applicable sheets from the Green Construction Code Submittal Checklist:[58]
    a. Project Overview
    b. Submittal Checklist
5. Provide date for/schedule final inspection of site work

Alternate Compliance Paths

Site Work projects are not eligible for ASHRAE 189.1, LEED, Green Communities or ICC 700 certification and are therefore not eligible for an alternate compliance path and are required to comply with the Green Construction Code.

[58] Appendix: Submittal Forms

BUILDING INSPECTIONS

It is the permit holder's responsibility to call for inspections at the appropriate stage of construction.[59] Inspections may be requested for the following day, depending on inspector availability, or up to five working days in advance of the day needed. Inspections can be scheduled over the phone by calling: (202) 442-9557. To schedule an inspection over the phone, you will need your permit number, the address where the work is being completed, and the three digit inspection code.[60]

You may select automatic telephone notification of inspection results when you request your inspection. You will receive a confirmation number if requested. Inspection results are available within 48 hours after the requested inspection is completed.

Building Inspection Process

Green and Energy Inspections are integrated into the general inspection process,[61] and will occur at the same time as other inspections that are required for your building project. Building inspections may include, but are not limited to, the verification of green and energy related code requirements as listed below:

Building Footing

Inspections at building footing are required prior to concrete placement, after trenches are excavated, forms are erected and reinforcement is in place, and shall verify compliance as required by the code and approved plans and specifications for:

- Green Construction Code
    1. Confirm soil reuse and restoration (Section 405)
    2. Progress on Site Waste Management Form (Section 406)

Building Foundation / Slab on Grade

Inspections associated with foundations are required before backfilling and shall verify compliance with the code and approved plans and specifications for:

- Energy Conservation Code
    1. Slab insulation R-value and depth (R402 prescriptive or R405 performance/C402 prescriptive or C405 performance)
    2. Basement or crawl space insulation R-Value (if exterior or integral) (R402 prescriptive or R405 performance/C402 prescriptive or C405 performance)
    3. Buried duct systems associated with HVAC systems (403)
    4. Piping Systems associated with HVAC or service hot water systems (R403.4.2)
    5. Freeze protection/snow melt systems (R403.8, C403.2.4.5)

Mechanical Rough-in

Inspections at mechanical rough-in are required the roof, framing, fire blocking, bracing and all duct and fuel piping to be concealed are in place, and prior to the installation of wall and ceiling membranes and shall verify compliance as required by the code and approved plans and specifications for:

[59] Chapter 1, Section 109 of the 2013 Building Code, 12 DCMR A

[60] Find inspection codes at: http://dcra.dc.gov/service/schedule-construction-inspection

[61] Find more on the inspection process at: dcra.dc.gov/ivr

- Energy Conservation Code
    1. Confirm installed HVAC equipment match specified and modeled type, efficiency and size (R403.6/C403.2.1)
    2. Confirm installed gravity and motorized dampers match specifications and plan locations (C402.4.5)
    3. Confirm installation of required demand control ventilation (C403.2.5.1)
    4. Confirm proper installation of insulation for ducts, plenums and piping associated with the HVAC system (R403.2.1, R403.3, C403.2.7, C403.2.8)
    5. Confirm sealing of ducts and plenums (R403.2.2)
    6. Confirm results of any required duct leakage testing (R403.2.2 if performing Rough-in test, C403.2.7.1.3 if using High-pressure duct systems)
    7. Confirm installed economizers and associated controls match specifications and plan locations (C403.3.1 Simple HVAC Systems or C403.4.1 Complex HVAC Systems)
    8. Confirm installed temperature, humidity and zone controls match specifications and plan locations (C403.2.4, C403.4.5)
    9. Confirm required sizing of HVAC system fans and motors (C403.2.10)
    10. Confirm required energy recovery capability (C403.2.6)
    11. Confirm existence of a means to balance HVAC systems
    12. Confirm installed controls for HVAC and hydronic systems match specifications and plan locations (C403.3.2
    13. Confirm required limitations on hot gas bypass for cooling systems
    14. Installation of radiant heating systems where not allowed (C403.2.11)

Electrical Rough-in

Inspections at electrical rough-in are required after the roof, framing, fire blocking, bracing and wiring are in place, and prior to the installation of insulation and wall and ceiling membranes and shall verify compliance as required by the code and approved plans and specifications for:

- Energy Conservation Code
    1. Confirm installation of all required lighting controls match specifications and plan locations
    2. Confirm installed lighting system components (fixtures and lamps) match specifications and plan locations (R404.1)
    3. Confirm installed electric meters match specifications and plan locations

Plumbing Rough-in

Inspections at plumbing rough-in are required after the roof, framing, fire blocking, bracing and all water, soil, waste and vent piping are in place, and prior to the installation of insulation and wall and ceiling membranes and shall verify compliance as required by the code and approved plans and specifications for:

- Energy Conservation Code
    1. The R-value, location, thickness, depth of burial and protection of insulation on hot water piping (R403.3.1, R403.4.2)
    2. Confirm the existence of required temperature controls on potable hot water systems
    3. Confirm the installation of automatic time switches on circulating hot water systems or heat trace (R403.4.1)
    4. Confirm the installation of heat traps on hot water storage tanks associated with non-circulating systems

Energy Efficiency and Insulation

Inspections of thermal envelope requirements are required to be performed before covering them with any other materials, and shall verify compliance with the code and approved plans and specifications for:

- Energy Conservation Code
    1. Wall assemblies including:
        - air barrier installation (R402.4.1.1, C402.4.1.1)
        - insulation values (R402 prescriptive/R405 performance)
    2. Floor assemblies (R402.4.1.1)
    3. Roof/ceiling assemblies (R402.4.1.1)
    4. Fenestration (R402.4.1.1, C402.3 prescriptive)
    5. Required Vestibules (C402.4.7)
- Green Construction Code
    1. Authorized to request documentation on recycling and landfill diversion of building construction waste (505)
    2. Verify insulation meets or exceeds the standards (806.6)

Mechanical/Electrical/Plumbing Final

Final mechanical, electrical and plumbing inspections are required after the permitted work is complete, all systems, appliances, and fixtures are in place and properly connected and the structure, building or portion thereof is ready for occupancy, and shall verify compliance with the code and approved plans and specifications for:

- Energy Conservation Code
    1. Recessed lighting in the building thermal envelope, sealed and IC-rated & labeled (R402.4.4, C402.4.8)
    2. Confirm Certificate at panel (R401.3)
    3. Confirm Lighting Equipment (R404.1)
- Green Construction Code
    1. Verify dust and debris cleaned from ducts and all return air filters were replaced prior to system flush and building occupancy
    2. Field Inspection of irrigation system installation to approved plans (614 Plumbing Code through 903.1)
    3. Verify lighting lamps, ballasts, controls and calibration has been completed (611.3)
    4. Confirm installed electric meters match specifications and plan locations (603)
    5. Verify means for air systems balancing (611.1.2.1)
    6. Verify means for hydronic systems balancing (611.1.2.2)

Building Final

Final inspections verify that all required inspections have been performed and approved and shall verify compliance with the code and approved plans and specifications for:

- Energy Conservation Code
    1. Written report of air leakage test results[62]
    2. Programmable Thermostat installed (R403.1.1)

[62] If using C402.4.1.2.3 as compliance path

3. Confirm weather stripping in critical areas (C402.4.4, C402.4.6)
4. Confirm duct insulation and sealing (for all exposed duct work) (R403.2.2)
5. Confirm results of any required duct leakage testing (R403.2.2 if performing Postconstruction test)
6. Confirm results of air leakage test (C402.4.1.2.3)

- Green Construction Code
  1. Verify finishes (including flooring and acoustic tile systems) meets or exceeds the standards
  2. Use Project Elective Checklist approved at permitting to verify completion of project elective selections
  3. Approved Completion of site remediation plan
  4. Verify completion of Stormwater management system operation (12 DCMR 5, through 903.1)
  5. Verify Site lighting (409)

Demolition or Razing Inspections Process

Demolition and Razing permits are required to call for a final inspection for compliance with GCC

- Green Construction Code
  1. Completed Site Waste Management Form[63]
  2. Completed Construction Waste Management Form[64]

Site Work Inspections Process

All site work permits are required to call for a final inspection for compliance with GCC.

- Green Construction Code
  1. Completed Site Waste Management Form[65]

Third-party Inspections

DCRA is responsible for the permitting of all construction projects and for inspection of projects, when notified by the permit holder, to confirm that the work complies with the issued permit and with the DC Construction Codes. Under certain conditions DCRA authorizes non-governmental persons or entities, called a "Third-party Agency", to perform field inspections of work performed pursuant to a building permit and to certify that such work complies with the Construction Codes.

All official guidance and requirements relating to the Third-party Inspections program, including Green and Energy Inspections, can be found in the most current version of the Third-party Inspections Manual. [66] There are currently no approved third-party green inspectors. Third-party inspectors will be required to enforce the Energy Conservation Code as outlined in the previous section.

[63] Submittal Forms: Site Waste Management
[64] Submittal Forms: Construction Waste Management
[65] Submittal Forms: Site Waste Management
[66] http://dcra.dc.gov/service/permits-third-party-plan-review-program

CERTIFICATE OF OCCUPANCY

The Green Construction Code requires a number of submittals and verifications prior to issuance of a certificate of occupancy (CoO) for the project.[67] The first certificate of occupancy for a floor above grade will trigger submittals and verification requirements, including temporary or conditional certificates of occupancy. Where a project must meet post-occupancy requirements, a certificate of occupancy will not be granted unless the code official determines that the project is on track to be verified in accordance with the path selected.

Along with the application for the certificate of occupancy, the owner should submit the additional documents listed below as applicable. All Green Construction Code documents should be submitted electronically to green.building@dc.gov. At this time, DCRA will notify you if your project will be required to submit copies of your preliminary and final commissioning reports.

If your project is meeting the GBA or GCC through a third party process, at the time of application for the certificate of occupancy, DCRA will login to view your project's progress in completing your specified compliance pathway, including, but not limited to, looking for the applicable documents listed below. Project teams that have not made significant progress towards completing required certification documentation may be requested to provide additional information before the CoO can be issued.

Building Certificate of Occupancy Process

Green Building Act

1. Where financial security is required, the property owner must submit evidence of a Financial Security[68] to DCRA, prior to issuance of the first certificate of occupancy for a story above grade plane, by one of four methods:
    a. Cash: 80% of the amount of the potential fine deposited into an escrow account in a financial institution in the District in the names of the applicant and the District. A copy of the binding escrow agreement is required to be submitted.
    b. Irrevocable letter of Credit: 80% of the amount of the potential fine posted as in Irrevocable Letter of Credit benefitting the District is required to be submitted.
    c. Bond: 80% of the amount of the potential fine posted as a bond benefitting the District is required to be submitted.
    d. Binding Pledge:[69] a copy of the recorded pledge, signed by the property owner and the District of Columbia Office of the Attorney General (OAG), is required to be submitted. The pledge agreement must be in a form approved by OAG.
2. Enterprise Green Communities Projects
    a. GPR will check for progress in Green Communities Certification Portal:
        i. Compliance Report progress including waiver requests
        ii. ENERGY STAR certificate or alternate documentation as pre-approved by Enterprise to show compliance
        iii. Project Photos
    b. Verification Checklist from Enterprise Green Communities[70]

[67] Section 110, Chapter 1 of the Building Code, 12 DCMR A
[68] Section 302.6, Chapter 3 of the Green Construction Code, 12 DCMR K
[69] http://www.dcregs.dc.gov/Gateway/NoticeHome.aspx?noticeid=4794921

3. LEED Projects[71]
    a. GPR will check for progress of the following in the LEED Online Account
        i. Minimum Program Requirements Checklist
        ii. Environmental Site Assessment
        iii. Minimum Energy Performance
        iv. Minimum Indoor Air Quality Performance
        v. Minimum Acoustical Performance
        vi. Environmental Tobacco Smoke (ETS) Control
        vii. Progress on credit compliance forms and checklists for credits selected

Green Construction Code and ASHRAE 189.1

2. Completed Site Waste Management Form[72]
3. Completed Construction Waste Management Form[73]
4. Commissioning Acknowledgement[74]
5. Preliminary Commissioning Report (if requested)

Green Construction Code Alternative Compliance Paths

1. Enterprise Green Communities Projects
    a. Verification Checklist from Enterprise Green Communities[75]
    b. Reviewer will check for progress in Green Communities Certification Portal:
        i. Compliance Report progress including waiver requests
        ii. ENERGY STAR certificate or alternate documentation as pre-approved by Enterprise to show compliance
        iii. Project Photos
2. LEED Projects[76]
    a. Reviewer will check for progress in online:
        i. Minimum Program Requirements Checklist
        ii. Environmental Site Assessment
        iii. Minimum Energy Performance
        iv. Minimum Indoor Air Quality Performance
        v. Minimum Acoustical Performance
        vi. Environmental Tobacco Smoke (ETS) Control
        vii. Progress on credit compliance forms and checklists for credits selected
3. National Green Building Standard/ICC 700[77]
    a. Copy of Rough Inspection Report from accredited verifier
    b. Copy of Verification Report from accredited verifier

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[70] If selected by Enterprise for Verification Protocol

[71] Forms can be found online at http://www.usgbc.org/resources/ and https://www.leedonline.com. Depending on the scope of your project not all forms listed above will be applicable

[72] Submittal Forms: Site Waste Management

[73] Submittal Forms: Construction Waste Management

[74] Submittal Forms: Preliminary Commissioning Report

[75] If selected by Enterprise for Verification Protocol

[76] Forms can be found online at http://www.usgbc.org/resources/ and https://www.leedonline.com. Depending on the scope of your project not all forms listed above will be applicable

[77] Find more information on NAHB process online at: http://www.homeinnovation.com/services/certification

POST OCCUPANCY

Historically, most construction projects in the District of Columbia are complete with the issuance of the Certificate of Occupancy. Because there are sections in the Green Building Act and Green Construction Code that require verification of equipment and system operation, and material selections, after the building is occupied, permitted projects will need to complete some submittals after issuance of a certificate of occupancy. These final pieces of information verify the project's compliance with some or all of its green building requirements.

Due dates for these post-certificate of occupancy submissions vary based on the green requirements for your project. Pay close attention to when your documentation is due to avoid any issues and/or fines. If you are using a third-party verification system, such as LEED, ICC 700 or Enterprise Green Communities, be sure to familiarize yourself with the deadlines for those programs to ensure your project remains eligible for certification. The property owner is responsible for demonstrating compliance, so if the property is transferred to a new owner prior to certification, the new owner must assume responsibility for paying any fines or fees that may result from non-compliance.

After C/O Issuance Submittals

Green Building Act

Within two years of the date of issuance of the first Certificate of Occupancy for a story above grade plane

1. Demonstrate proof of compliance with the appropriate LEED or Green Communities level using one of the following methods:
    a. Proof of certification from GBCI or Enterprise
    b. Verified certification equivalency through DCRA or the approved third-party verifier as determined at Building Permit review stage

Green Construction Code or ASHRAE 189.1

Within 180 days of the date of issuance of the first Certificate of Occupancy for a story above grade plane

1. Submit Material Selection Form[78] and one of the following:
    a. Life Cycle Assessment Report[79]
    b. Total Cost Calculation[80]
2. Submit a Final Commissioning Report[81] including:
    a. Results of all functional performance tests
    b. Disposition of all deficiencies found during testing including details of corrective measures completed or proposed
    c. All functional performance test procedures used during the commissioning process including the measurable criteria for test acceptance
3. Any additional documentation for Project Electives[82]

[78] Submittal Forms: Material Selection

[79] If complying with Section 505, Chapter 5 of the Green Construction Code, 12 DCMR K through the alternative compliance under 505.1.1

[80] Submittal Forms: Material Selection, IgCC Total Materials Cost Calculation

[81] Submittal Forms: Final Commissioning Report

[82] Submittal Forms: Project Elective Checklist. New Construction Projects are required to have 15 project electives, Level 3 Alterations 13 project electives, all others are not required to seek electives at this time.

4. Copy of the Final Commissioning Report (if requested)

Green Construction Code Alternative Compliance Path

Within 12 months of the date of issuance of the first Certificate of Occupancy for a story above grade plane

1. LEED Projects: Proof of Certification by GBCI
2. Enterprise Green Communities Projects: Postbuild Approval Notification from Enterprise
3. National Green Building Standard/ICC 700:
    a. Home Innovation NGBS Green Certified certificate
    b. ENERGY STAR certificate

ENFORCEMENT

While it is expected that projects will comply with the green building and energy requirements, in the event that projects do not comply, DCRA has the ability to enforce requirements through options, including, but not limited to, monetary fines and civil and criminal proceedings.[83]

The Green Building Act (GBA) provides an additional enforcement mechanism because of the financial security that must be posted for certain projects prior to issuance of a certificate of occupancy. Where the project fails to submit verification as required by the GBA, and associated regulations, the District has the right to draw down on the financial security submitted as cash, irrevocable letter of credit or bond, and to enforce a pledge agreement[84] pursuant to its terms.

If you have questions regarding any applicability of any of the GBA, GCC or ECC, please contact DCRA's Green Building Program at green.building@dc.gov.

[83] Chapter 1, Section 113 of the 2013 Building Code, 12 DCMR A

[84] http://www.dcregs.dc.gov/Gateway/NoticeHome.aspx?noticeid=4794921

SECTIONAL REFERENCE GUIDE

While the information presented in these guidelines is believed to be correct, the parties involved assume no responsibility for its accuracy or for the opinions expressed herein. The material presented in this publication is not considered "Code" and should only be used for reference and guidance in complying with the requirements of the District of Columbia's Green Building and Energy Conservation Codes. Users of information from this publication assume all liability arising from such use.

How to Use This Reference Guide

Each section of the Green Construction and Energy Conservation Codes will follow an outline similar to below to provide additional information and guidance on code application. Future releases of this reference guide will include additional information to help building professionals comply with the Energy Conservation and Green Construction Codes

Related Codes and Referenced Standards

This section provides lists of all pre-approved agencies, processes, sources, standards and other references throughout the Green Construction and Energy Conservation Codes that cite an "approved" alternative to the stated code language. These lists will be amended in compliance with Section 104 of the Construction Code. References to all "approved" alternatives are all listed, even if currently no other approved alternative exists which is noted under the appropriate code section.

ASHRAE 189.1

Section 3: Definitions, Abbreviations, and Acronyms

Related Codes and Referenced Standards

3.2 Acceptance Representative. The acceptance representative shall meet the qualifications for an *approved agency* set forth in the Green Building Program Manual.

An *approved agency* is required to meet the credentials as follows:

- Documented commissioning authority experience in at least two building projects.
- Must be independent of the work of design and construction of this project (though may be an employee of the project design firm).
- Must not be an employee of, or contracted through, a contractor or construction manager holding construction contracts of this project
- May be a qualified employee or consultant of the owner of this project

Section 6: Water Use Efficiency

Related Codes and Referenced Standards

6.4.3 Special Water Features. Ornamental fountains and other ornamental water features shall be supplied either by alternate on-site sources of water or municipally reclaimed water delivered by the local water utility acceptable to the AHJ.

6.5 Performance Option. Calculations shall be done in accordance with generally accepted engineering standards and handbooks acceptable to the AHJ.

Generally accepted engineering standards and handbooks for calculating water use reduction are as follows:

- LEED guidance on water reduction calculations

Section 8: Indoor Environmental Quality

Related Codes and Referenced Standards

8.3.1.3.b Ozone. In addition to Section 6.2.1.3 of ANSI/ASHRAE Standard 62.1, when the building is located in an area that is designated "non-attainment" with the National Ambient Air Quality Standards for ozone as determined by the AHJ, air-cleaning devices having a removal efficiency of no less than the efficiency specified in Section 6.2.1.3 of ANSI/ASHRAE 62.1 shall be provided to clean outdoor air prior to its introduction to occupied spaces.

Areas that designated "non-attainment" with the National Ambient Air Quality Standards for ozone can be determined from the EPA at http://www.epa.gov/oaqps001/greenbk/

8.4.1.2 Office Space Shading Exceptions 1. Translucent panels and glazing systems with a measured haze value greater than 90%, tested according to ASTM D1003 (notwithstanding its scope) or other test method approved by the AHJ, and that are entirely 8 ft (2.5 m) above the floor, do not require external shading devices.

Currently there are no other approved test methods.

Section 9: The Building's Impact on the Atmosphere, Materials and Resources

Related Codes and Referenced Standards

9.5.1 Life Cycle Assessment. Each building alterative shall consist of a common design, construction, and materials for the locale, including building size and use, as commonly approved by the AHJ.

Section 10: Construction and Plans for Operation

Related Codes and Referenced Standards

10.3.1.1 Building Acceptance Testing. Acceptance testing shall be performed on all building in accordance with this section using generally accepted engineering standards and handbooks acceptable to the AHJ.

Accepted engineering standards and handbooks are as follows:

10.3.1.2 Building Project Commissioning. Commissioning shall be performed in accordance with this section using generally accepted engineering standards and handbooks acceptable to the AHJ.

Accepted engineering standards and handbooks are as follows:

IgCC Chapter 4: Site Development and Land Use

Section 405: Management of Vegetation, Soils and Erosion Control

405.1.4.2.2.2 Infiltration Rates. For slopes areas where the methods provided in the referenced standards cannot be used successfully, alternate methods *approved* by the *code official* shall be permitted provide that the same method is used to test both reference soil and onsite soil.

Currently there are no other approved test methods.

Section 406: Building Site Waste Management

406.3 Verification. Prior to issuance of the first certificate of occupancy, the *Department* is authorized to require the *owner*, contractor or an *approved agency* to provide verification of the project's compliance with the Section 406.1.

Currently there are no other approved agencies.

IgCC Chapter 5: Material Resource Conservation & Efficiency

Section 502: Construction Material Management

Related Codes and Referenced Standards

502.1.1 Storage and handling of materials. Material stored and handled onsite during construction phases shall comply with the manufacturer's printed instructions. Where manufacturer's printed instructions are not available, *approved standards or guidelines* shall be followed.

Approved standards and guidelines for material storage/handling are as follows:

- US Department of the Interior, Security, Safety and Law Enforcement Office, Safety and Health Office, Reclamation Safety and Occupational Health, Section 11
- US Department of Labor, Occupational Safety and Health Administration, Materials Handling and Storing, Publication 2236

Section 505: Material Selection

Related Codes and Referenced Standards

505.1.1 Whole building life cycle assessment; alternative compliance. The life cycle assessment tool shall be *approved* by the *code official*.

Approved life cycle assessment tools are as follows:

- Tools must meet ISO 14044:2006
- ATHENA Institute Impact Estimator for Buildings
- National Institute for Standards and Technology BEES (Building for Environmental and Economic Sustainability)
- PE International GaBi Software

IgCC Chapter 6: Energy Conservation, Efficiency and CO2e Emission Reduction

Section 602: Modeled Performance Pathway Requirements

Related Codes and Referenced Standards

602.1.3 Registered design professional in responsible charge of building energy simulation. Modelers engaged by the registered design professional in responsible charge of building energy simulation shall be certified by an *approved accrediting entity*.

Approved accrediting entities for energy modeling are as follows:

- Home Energy Raters (for single family, low-rise and mid-rise multifamily buildings)
- ASHRAE Building Energy Modeling Professional

Section 603: Energy Metering, Monitoring and Reporting

Related Codes and Referenced Standards

603.2 Energy distribution design requirements and load type isolation in buildings. Buildings designed and constructed such that the total usage of each of the load types described in Sections 603.2.1 through 603.2.5 shall be permitted to be measured through the use of installed sub-meters or *other equivalent methods as approved*.

Currently there are no other approved equivalent methods.

603.4 Energy load type sub-metering. For buildings that are not less than 50,000 square feet (4645 m2) in total building floor area, the energy use of the categories specified in Table 603.2 shall be metered through the use of sub-meters or other *approved equivalent methods* meeting the capability requirements of Section 603.3.

Currently there are no other approved equivalent methods.

603.4.1 Buildings less than 50,000 square feet. For buildings that are less than 50,000 (4645 m2) in total building floor area, the energy distribution system shall be designed to accommodate the future installation of sub-meters or other *approved devices* in accordance with Section 603.4.

Currently there are no other approved devices.

603.4.1 Buildings less than 50,000 square feet. This includes, but is not limited to, providing access to distribution lines and ensuring adequate space for the installation of sub-meters or other *approved devices*.

Currently there are no other approved devices.

603.5 Minimum energy measurement and verification. Meters, sub-meters, and other *approved* devices installed in compliance with Sections 603.3 and 603.4 shall be connected to a data acquisition and management system capable of storing not less than 36 months worth of data collected by all meters and other *approved devices*.

Currently there are no other approved devices.

Section 608: Building Electrical Power and Lighting Systems

Related Codes and Referenced Standards

608.9 Exterior lighting. Exceptions: Where *approved* because of historical, safety, signage or emergency lighting considerations.

Approved documentation includes:

- A letter from the D.C. Historic Preservation Officer or the Keeper of the National Register of Historic Places stating that compliance with the exterior lighting requirements will cause the loss of irretrievable historic components that may lead to the de-listing of the *building* or other *structure* from the D.C. or National Register of Historic Places (either as an individual listing or as a contributing resource to a listed historic district).

Section 611: Energy Systems Commissioning and Completion

Related Codes and Referenced Standards

611.1.1 Commissioning plan. A commissioning plan shall be developed by a registered design professional or *approved agency* and shall include at a minimum all of the following items:

A registered design professional or approved agency must complete the following:

- Must lead, review and oversee the completion of all commissioning process activities

A registered design professional must meet the following requirements:

- Must be independent of the work of design and construction of this project (though may be an employee of the project design firm).
- Must not be an employee of, or contracted through, a contractor or construction manager holding construction contracts of this project.
- Must have prior experience commissioning a minimum of two (2) projects of similar scope.
- May be an employee or consultant of the owner of this project meeting the above requirements.

An approved agency must meet the following credentials:

- Must be a Certified Commissioning Professional certified by one of the following commissioning provider certification agencies:
  a. Building Commissioning Certification Board (CCP).
  b. ASHRAE (CPMP).
  c. NEEB (BSC-CP).
  d. AEE (CPCP).
- Must be independent of the work of design and construction of this project (though may be an employee of the project design firm).

- Must not be an employee of, or contracted through, a contractor or construction manager holding construction contracts of this project.
    - May be an employee or consultant of the owner of this project meeting the above requirements.

611.1.4 Preliminary commissioning report. A preliminary report of commissioning test procedures and results shall be completed and certified by the registered design professional or *approved agency* and provided to the building owner prior to the final mechanical inspection.

Approved agencies for completing and certifying a preliminary commissioning report are the same as in 611.1.1 above.

611.1.4.3 Certification. A certification signed and sealed by the registered design professional or *approved agency*, documenting that the mechanical and service water heating systems comply with Sections C403 and C404 of the Energy Conservation Code shall be provided to the code official by or before the final inspection.

Approved agencies for certifying mechanical and water heating are the same as in 611.1.1 above.

611.3 Lighting commissioning and completion requirements. The registered design professional or *approved agency* shall provide evidence of compliance with the provisions of Sections 611.3.1 and 611.3.2.

Approved agencies for providing evidence of compliance with lighting commissioning and completion are the same as in 611.1.1 above.

611.3.1 Pre-occupancy requirement. Prior to final electrical inspection, the *approved agency* conducting commissioning shall verify controls have been installed in accordance with the approved construction documents.

Approved agencies for verifying controls are the same as in 611.1.1 above.

IgCC Chapter 8: Indoor Environmental Quality and Control

Section 803: HVAC Systems

Related Codes and Referenced Standards

803.1.1 Duct openings. Duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal or shall be closed by an *approved method* to reduce the amount of dust and debris that collects in the system from the time or rough-in installation and until startup of the heating and cooling equipment.

Currently there are no additional approved methods.

IgCC Chapter 9: Commissioning, Operation and Maintenance

Section 902: Approved Agency

Related Codes and Referenced Standards

902.1 Approved agency. The code official shall determine the required qualifications of an *approved agency* for purposes of this chapter and of Section 611, in accordance with Section 903.1 and the Green Building Program Manual.

An approved agency must lead, review and oversee the completion of all commissioning process activities

An approved agency can either be a *registered design professional meeting the following requirements;*

- Must be independent of the work of design and construction of this project (though may be an employee of the project design firm).
- Must not be an employee of, or contracted through, a contractor or construction manager holding construction contracts of this project.
- Must have prior experience commissioning a minimum of two (2) projects of similar scope.
- May be an employee or consultant of the owner of this project meeting the above requirements.

Or must meet the following credentials:

- Must be a Certified Commissioning Professional certified by one of the following commissioning provider certification agencies:
    a. Building Commissioning Certification Board (CCP).
    b. ASHRAE (CPMP).
    c. NEEB (BSC-CP).
    d. AEE (CPCP).
- Must be independent of the work of design and construction of this project (though may be an employee of the project design firm).
- Must not be an employee of, or contracted through, a contractor or construction manager holding construction contracts of this project.
    - May be an employee or consultant of the owner of this project meeting the above requirements.

Section 903: Commissioning

Related Codes and Referenced Standards

903.1 General. Where application is made for construction as described in this section, the registered design professional in responsible charge or *approved agency* shall perform commissioning during construction as required by Table 903.1.

Approved agencies for completing commissioning are the same as in 902.1 above.

IgCC Appendix A: Project Electives

Section A105: Material Resource Conservation and Efficiency

Related Codes and Referenced Standards

A105.4.1 Plan and components. The maintenance, repair and replacement schedule shall be based on manufacturer's reference service life data or *other approved sources* for the building components.

Approved sources for building service life data are as follows:

- ASTM E-632 Standard practice for Developing Accelerated Tests to Aid Production of Service Life of Building Components and Materials
- BS 7543 Guide to Durability of Building and Building Elements, Products and Components
- AIJ Principal Guide for Service Life Planning of Buildings
- S478 Guideline on Durability in Buildings.

IECC Commercial Energy Efficiency

Section C403.2: Mechanical Systems

Related Codes and Referenced Standards

C403.2.1 Calculation of heating and cooling loads. **…**Alternatively, design loads shall be determined by an *approved equivalent computation procedure*, using the design parameters specified in Chapter 3.

Currently there are no additional approved equivalent computation procedures.

C403.2.3 HVAC equipment performance requirements. The efficiency shall be verified through certification under an *approved certification program* or, if no certification program exists, the equipment efficiency ratings shall be supported by data furnished by the manufacturer.

Approved certification programs for HVAC equipment performance requirements are as follows:

- Air-Conditioning, Heating, and Refrigeration Institute (AHRI)
- ENERGY STAR

Section C405: Total Building Performance

Related Codes and Referenced Standards

C405.2.1.2 Light reduction controls. Lighting reduction shall be achieved by one of the following or *other approved method.*

Currently there are no additional approved procedures.

C405.5.1.3 Other luminaires. The wattage of all other lighting equipment shall be the wattage of the lighting equipment verified through data furnished by the manufacturer or *other approved sources*.

Currently there are no additional approved sources.

C405.6 Exterior lighting. Exception: Where *approved* because of historical, safety, signage or emergency lighting considerations.

Approved documentation includes:

- A letter from the D.C. Historic Preservation Officer or the Keeper of the National Register of Historic Places stating that compliance with the exterior lighting requirements will cause the loss of irretrievable historic components that may lead to the de-listing of the *building* or other *structure* from the D.C. or National Register of Historic Places (either as an individual listing or as a contributing resource to a listed historic district).

C407.3 Performance based compliance. Energy prices shall be taken from *a source approved* by the code official, such as the Department of Energy, Energy Information Administration's State Energy Price and Expenditure Report.

Approved sources for energy prices are as follows:

- Department of Energy, Energy Information Administration's *State Energy Price and Expenditure Report*
- US Department of Labor, Bureau of Labor Statistics, Consumer Price Index

Section C407: Total Building Performance

Related Codes and Referenced Standards

C407.6 Calculation software tools. Climate data for a full calendar year and shall reflect *approved coincident hourly data* for temperature, solar radiation, humidify and wind speed for the building location.

Approved sources for coincident hourly data for temperature, solar radiation, humidify and wind speeds for the building location are as follows:

- National Climatic Data Center
- ACCA Manual J
- ASHRAE

C407.6.1 Specific approval. *Performance analysis tools* meeting the applicable subsections of Section C407 and tested according to ASHRAE 140 shall permitted to be *approved*. Tools are to be approved based on meeting a specified threshold for a jurisdiction.

Currently there are no additional approved procedures.

C407.6.2 Input Values. Where calculations require input values not specified by Sections C402, C403, C404 and C405, those input values shall be taken from an *approved source*.

Approved sources for input values for Building Envelope, Building Mechanical Systems and Service Water Heating are as follows:

- Manufacturer specifications approved before construction start
- ANSI/ASHRAE/IESNA Standard 90.1-2010

IECC Residential Energy Efficiency

Section R402.4: Air Leakage

Related Codes and Referenced Standards

R402.4.1.1 Installation. Where required by the code official, an *approved third-party* shall inspect all components and verify compliance.

There are currently no approved third parties.

R402.4.1.2 Testing. Where required by the code official, testing shall be conducted by an *approved third-party*. … Testing shall be conducted in accordance with a method approved by the *code official* including, but not limited to, an *approved* sampling protocol.

Approved third parties testing of the building thermal envelope are as follows:

- Home Energy Raters and/or Providers
- Building Performance Institute (BPI) Building Analyst
- Building Performance Institute (BPI) Multifamily Building Analyst

The following sampling protocols are approved for use:

- RESNET Sampling Protocol

Section R403.2: Ducts

Related Codes and Referenced Standards

R403.2.2 Sealing (mandatory) …Testing shall be conducted in accordance with a method approved by the *code official*, including, but not limited to, an *approved* sampling protocol.

The following sampling protocols are approved for use:

- RESNET Sampling Protocol

Section R403.6: Equipment Sizing

Related Codes and Referenced Standards

R403.6 Equipment Sizing. Heating and cooling equipment shall be sized in accordance with ACCA Manual S based on building loads calculated in accordance with ACCA Manual J or *other approved heating and cooling calculation methods.*

Currently there are no other approved procedures.

Section R405: Simulated Performance Alternative

Related Codes and Referenced Standards

R405.3 Performance-based compliance. Energy prices shall be taken from a source *approved* by the *code official,* such as the Department of Energy, Energy Information Administration's *State Energy Price and Expenditure Report*.

Approved sources for energy prices are as follows:

- Department of Energy, Energy Information Administration's *State Energy Price and Expenditure Report*
- US Department of Labor, Bureau of Labor Statistics, Consumer Price Index

R405.6.2 Specific approval. *Performance analysis tools* meeting the applicable sections of Section R405 shall be permitted to be *approved*. Tools are permitted to be approved based on meeting a specified threshold for a jurisdiction.

Currently there are no approved performance analysis tools listed in the code.

R405.6.3 Input Values. When calculations require input values not specified by Sections R402, R403, R404, and R405, those input values shall be taken from an *approved source*.

Approved sources for input values for Building Thermal Envelope, Systems, Electrical Power and Lighting Systems, Simulated Performance Alternative are as follows:

- Manufacturer specifications approved before construction start
- ASHRAE 90.1-2010
- ENERGY STAR

APPENDICES

DCRA Compliance Review Request

TO: **David Epley, Green Building and Sustainability Coordinator**
Department of Consumer and Regulatory Affairs
1100 4th Street SW, Washington, DC 20024

FROM: _____
_____
_____
_____

DATE: _____

SUBJECT: **Request for Code Official Determination of Green Building Act Compliance**

In order to establish verification of compliance with the Green Building Act, I/we formally request a determination by the code official that the following project meets or exceeds the applicable LEED standard or the Enterprise Green Communities Criteria (or approved substantially equivalent standard).

Project Address: _____

Building Permit #: _____

Scope: New Construction Substantial Improvement

% of Public Funding:[85] _____

Use: Non-Residential Tenant Fit Out Residential
Educational Mixed Use Interiors

Gross Floor Area: _____

Certification: Green Communities LEED; Standard: _____
Level: _____

[85] As defined under the Green Building Act and adopted under 12 DCMR K, 302.2

Please contact us if you require more information at this time. We will submit documentation with our building permit application to fulfill the requirements of the review.

Thank you.

By signing below, under penalties of perjury, I declare that I have examined this request, including accompanying documents, and, to the best of my knowledge and belief, the request contains all the relevant facts relating to the request, and such facts are true, correct, and complete.

_____ (Signature)

_____ (Printed Name)

_____ (Title)

_____ (Date)

Green Determination Request

TO: **David Epley, Green Building and Sustainability Coordinator**
Department of Consumer and Regulatory Affairs
1100 4th Street SW, Washington, DC 20024

FROM: _____ **(Name/Title)**
_____ **(Company)**
_____ **(Address)**
_____ **(Contact Phone #)**

DATE: _____

SUBJECT: **Green Building Determination**

I/we would like to request a determination on the applicable requirements under the District Green Construction Code (the 2012 edition of the International Green Construction Code as amended by 12 DCMR K) for the following project based on the facts provided below and in attachments:

Project Address: _____

Building Permit #: _____

Scope: New Construction

Alteration/Addition/Repair; Level: I II III

[provide full description of work in Exhibit A]

Cost of Work: _____

Value of Property: _____ Source: _____

% of Public Funding: _____ [provide full description of funding in Exhibit B]

Use:	Non-Residential	Tenant Fit Out	Residential
	Educational	Mixed Use	
	[provide full description of work in Exhibit A]		
Gross Floor Area:	_____		

Please contact us if you require more information at this time.

Thank you.

By signing below, under penalties of perjury, I declare that I have examined this request, including accompanying documents, and, to the best of my knowledge and belief, the request contains all the relevant facts relating to the request, and such facts are true, correct, and complete.

_____ (Signature)

_____ (Printed Name)

_____ (Date)

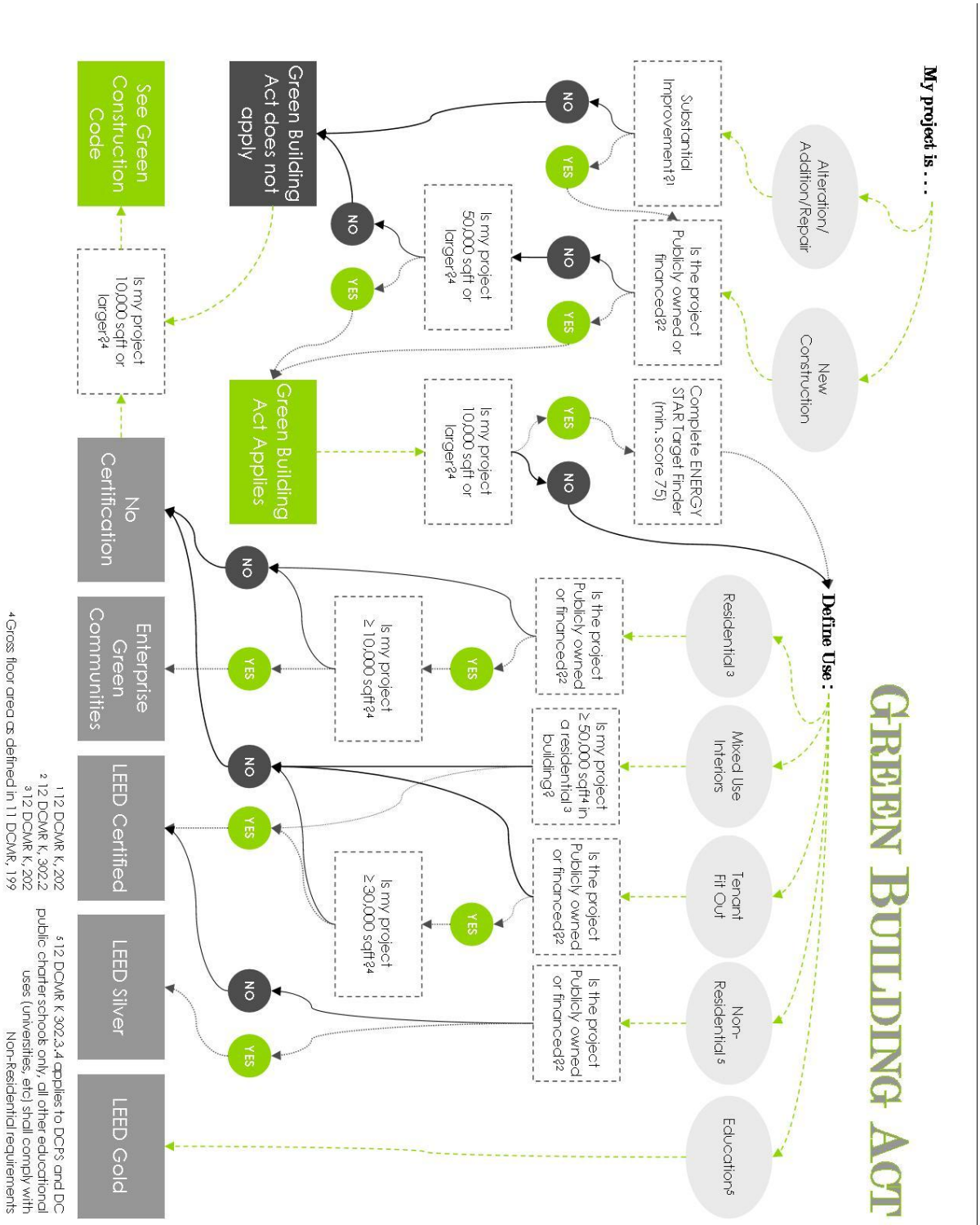
EXHIBIT A

[DESCRIPTION OF PROJECT/WORK]

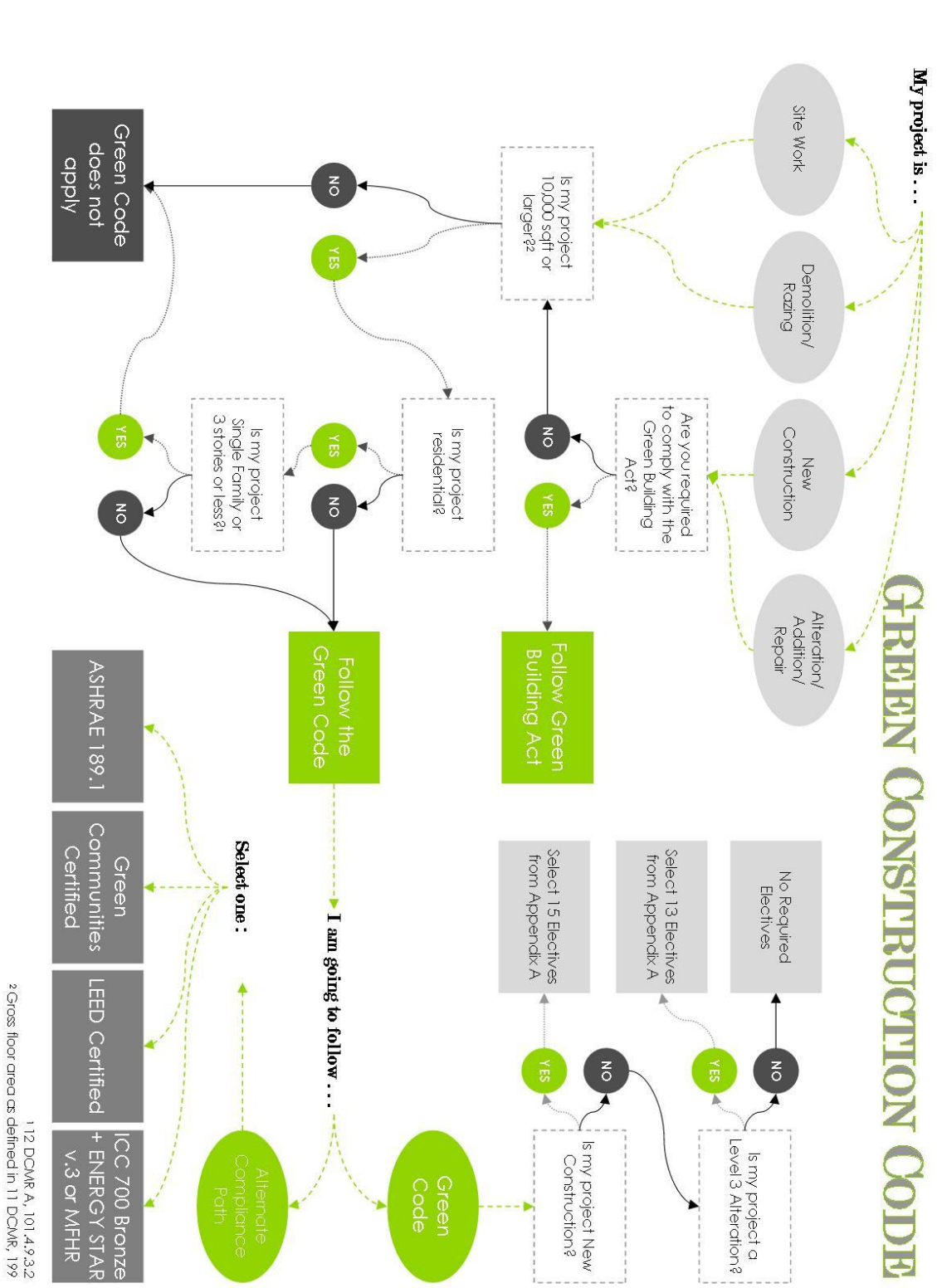
EXHIBIT B

[DESCRIPTION OF FUNDING]

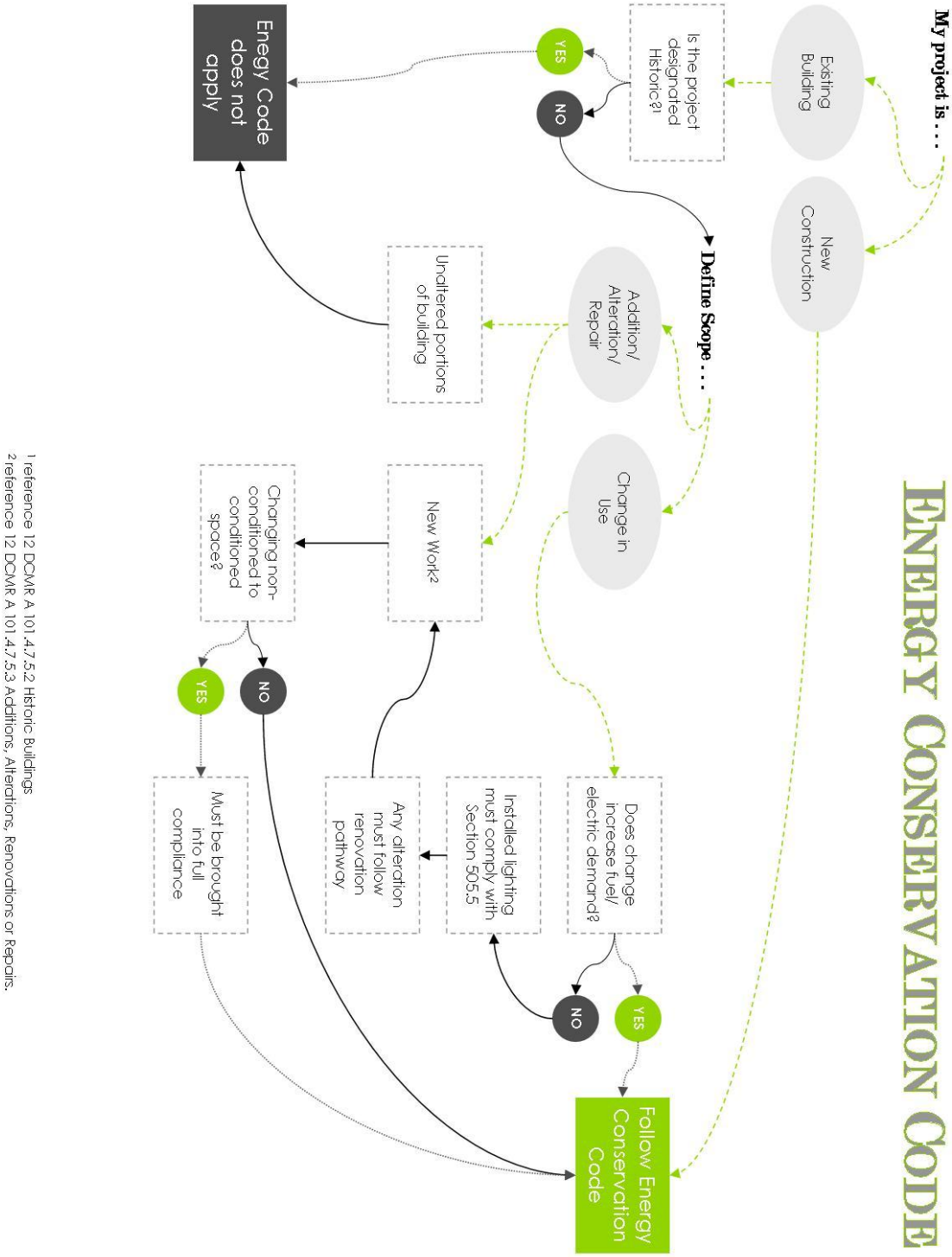
Green Building Act Self-Selection Guide



Green Construction Code Self-Selection Guide



Energy Conservation Code Self-Selection Guide



1 reference 12 DCMR A 101.4.7.5.2 Historic Buildings
2 reference 12 DCMR A 101.4.7.5.3 Additions, Alterations, Renovations or Repairs.