

NOTE: Denver’s Green Buildings Ordinance applies to all existing commercial buildings with 25,000 GSF or larger upon roof replacement or roof recover. For all permits issued after January 1, 2021, the effective code is 2019 Denver Building Code including 2018 IBC & 2018 IECC and all Denver Amendments.

#### Abbreviations

GBO = Green Buildings Ordinance  
R+Rs = Rules & Regulations  
GBDF = Green Building Declaration Form  
SDP = Site Development Plan  
IBC = International Building Code  
IECC = International Energy Conservation Code  
DBCA = Denver Building Code Amendments

## 1. Required & Reference Documents

[Click here to view the Green Buildings Ordinance](#)

[Click here to download the GBO Rules & Regulations PDF](#)

[Click here to download the Green Building Declaration Form for Existing Buildings](#)

[Denver Roof Permit Application](#)

## 2. Project Compliance

- A. All projects must address two areas of compliance:
  - i. Provide a cool roof, and
  - ii. Select an additional green building option (A through I) on the GBDF.
- B. Exemptions are available for certain types of projects. See Section 10-302(d) in the GBO R+Rs for a complete list of available exemptions.

## 3. Construction Permits

- A. At the time of the permit submittal, provide all applicable materials listed in the submittal requirements table below necessary to demonstrate conformance with requirements specifically outlined in the GBO R+Rs Article III pertaining to cool roof requirements and R+Rs Article IV Section 4.03(a) pertaining to Renewable Energy requirements.
- B. Note – Renewable System Permit - please submit full photovoltaic system construction documents, signed and stamped, for Structural, Electrical, Fire and Zoning reviews and renewable system permit. Green Buildings Ordinance compliance and roof permitting may precede these approvals and the associated permit; however, installation of this system to provide compliance with the GBO is required within 12 months of final roof inspection.
- C. Projects in a [historic or landmark district](#) will need approval from [Landmark Preservation](#) before applying for electrical, zoning, or building permits.

#### 4. Project Requirements for Option C:

##### On-Site Renewable Energy

- A. Total roof replacement/additions, select a coverage area (choose one):
- i. 5% of building or addition's Gross Floor Area
  - ii. 42% of the Total Roof Area
  - iii. An amount capable of generating 100% of the building's estimated average annual electricity use
- B. Replacing roof section(s), select a coverage area (choose one):
- i.  $(5\% \text{ of the building GFA} \times \text{roof section area}) \div \text{total roof area of the building}$
  - ii. 42% of the roof section(s)
  - iii. An amount capable of generating 100% of the building's estimated average annual electricity use
- C. Reference R+Rs for specifics including those related to:
- ❖ 16% minimum efficiency
  - ❖ Clearances
  - ❖ Other renewable equivalency to solar output *if applicable*
  - ❖ *Note - Existing solar panels can count toward the solar coverage requirements of the ordinance, provided the PV system achieves a total minimum efficiency rating of 16%.*

### Mandatory Cool Roof Requirements for All Existing Buildings:

#	Construction Phase	Applicable Code Section	Submittal Item	Requirement
1	Roof Permit	R+Rs 2.03(c)	Green Building Declaration Form	Provide a <a href="#">Green Building Declaration Form for Existing Buildings</a> with all fields infilled including the owner's signature.
2	Roof Permit		Roof permit application	Provide a <a href="#">roof permit application</a> with the project valuation.
3	Roof Permit	R+Rs 2.03(a)	Roof plan	Provide a roof plan with the total roof area quantified.
4	Roof Permit	R+Rs 3.02(a) R+Rs 3.03(a) R+Rs 3.03(b)	Roof product & solar reflectance data	Provide cool roof covering and paver solar reflectance data with the color circled, highlighted, or otherwise identified in conformance with Table 1 - Reflectance Requirements in the GBO R+Rs. This information may be included in the construction document specifications or on the roof plan.
5	Roof Permit		Roof assembly section details	<u>Roof section detail</u> - OR - <u>a detailed, layer-by-layer description</u> of the roof assembly. Please provide both a detail for the existing assembly AND the proposed assembly.
6	Roof Permit	R+Rs 3.03(b)(i)	Condensation avoidance strategy	Provide one of the following options: (1) Air barrier AND vapor retarder product data if the low-slope prescriptive assembly is being provided, OR (2) A dew point analysis from a registered professional if a prescriptive assembly is NOT being provided, OR (3) A note stating that an existing cool roof is being replaced; if a note is provided, then the prescriptive assembly or the dew point analysis does NOT need to be provided.
7	Roof Permit	IBC 1202.2 IBC 1202.3	Ventilation details (steep slope only)	Provide a roof plan illustrating locations, sizing, and calculations.
8	Roof Permit	R+Rs 3.04	Exemptions	For any exemptions claimed, please provide substantiation.
9	Roof Permit	R+Rs 3.04(a)	Exemptions - Character defining roofs	See applicable GBO R+Rs Section 3.04(a) for additional submittal requirements if claiming a character defining roof. It is recommended that any project considering applying for a character defining cool roof exemption, contact us first at <a href="mailto:stephen.sanderson@denvergov.org">stephen.sanderson@denvergov.org</a> or <a href="mailto:christy.collins@denvergov.org">christy.collins@denvergov.org</a> .
10	Roof Permit		Exemptions - Existing cool roof	Simply provide a note on the roof plan or roof assembly description submittal document.
11	Roof Permit	R+Rs Section 10-302(d)(3)(a)	Exemptions - Residential building below 5 stories OR 62.5' in height	Provide photos and/or drawings substantiating the claimed exemption as a residential property <5 stories OR 62.5' or less in height with measurements.

### Option C: On-Site Renewable Energy – Additional Green Buildings Requirements:

12	Roof Permit	R+Rs 4.03(a)(i)	PV coverage requirements	Detailed calculations of PV coverage required including dimensioned building and/or roof plan(s) as applicable
13	Roof Permit	R+Rs 4.03 (a)(iv) & (viii)	PV clearances	Roof plan identifying and dimensioning all GBO R+Rs required clearances
14	Roof Permit	R+Rs 4.03(a)(iii)	PV system information	PV panel product data including efficiency rating and system capacity (kW)
15	Roof Permit	R+Rs 4.03(a)(v)	General	<i>If providing to generate 100% of building's annual electricity use, include the most recent complete year's annual electricity use in the submittal.</i>
16	Roof Permit		General	Additional materials as required to illustrate compliance with GBO R+Rs Section 4.03(a)(i), (iii) through (iv), (vi), (vii), and (viii)
17	Separate Permits	R+Rs 2.03(g)	Separate CD submittals and permits	<i>If applicable, separate CD submittals are required for fire protection systems; photovoltaic system; and zoning.</i>
18	Post C.O.		Inspections	PV system must be installed and inspected within 12 months of final roof inspection