MINUTES
GBI Consensus Body for New Construction- Call #8
Webinar/Teleconference
April 5, 2024, from 1:00 to 3:00 p.m. ET

NOTE ALL TIMES ARE EASTERN TIME

Consensus Body Members in Attendance

Full Name	Company	4/5/24	4/3/24	3/27/24	3/6/24	3/4/24	3/8/23
Jeff Bradley	American Wood Council	X	X (arrived late)	X	X	X (left early)	X
Karen Butler	EPA, Office of Air and Radiation	X	X	X	X	X	X
Virgil Campaneria (Chair)	Gurri Matute PA	Absent	X	Absent	X	X	X
Michael Cudahy	PPFA - PPEF	X	X	X	X	Absent	X
Larry Eisenberg	Ovus Partners 360	X	X	X	X	X	X (Proxy Shymko)
Tehmina Husain	Merrick and Company	N/A	N/A	N/A	Absent	Absent	X
Josh Jacobs	WAP Sustainability	Absent	Absent	X	X	X	Absent
Ashley Langenfeld	Hoefer Welker	X (Proxy Eisenberg)	X (left early)	X	X	X	X
Michael Lehman	ConTech Lighting	X (acting Chair)	X	Absent	Absent	X	X
John Mullen	IAPMO	Absent	X (Proxy Butler)	X (Proxy Tin)	X	X	X
James O'Brien	Independent Environmental Consultant	X	Absent	X (Acting Chair)	X	X	X
Max Puchtel	American Institute of Steel Construction	Absent	X	X	X	X	Absent
Jane Rohde	JSR Associates, Inc. (representing RFCI)	X (Proxy Cudahy)	X (Proxy Cudahy)	X	Absent	X	Absent

Gord Shymko	G. F. Shymko & Associates Inc.	N/A	N/A	N/A	N/A	N/A	X
Stephen Szoke	American Concrete Institute	Absent	X	X (Proxy Puchtel)	X	X	X
Sumayyah Theron	Cyclone Energy Group	X	X (left early)	X	X	X (left early)	N/A
Angela Tin	American Lung Association	X	Absent	X	X	X	X

Voting Alternates in Attendance

Full Name	Organization	4/5/24	4/3/24	3/27/24	3/6/24	3/4/24	3/8/23
John Cross	American Institute of Steel Construction						X

Interested Parties in Attendance

Full Name	Organization	4/5/24	4/3/24	3/27/24	3/6/24	3/4/24	3/8/23
Ron Burke	Alliance for Water Efficiency						X
Viken Koukounian	Parklane Mechanical Acoustics		X	X (arrived late)			X
Julian Mills – Beale	NRMCA						X
Niklas Moeller	LogiSon Acoustic Network					X	

Staff in Attendance

Full Name	Organization	4/5/24	4/3/24	3/27/24	3/6/24	3/4/24	3/8/23
Emily Marx	Secretariat, GBI	X	X	X	X	X	X
Sara Rademacher	Staff, GBI	X	X	X		X	X
Micah Thomas	Staff, GBI				X		

Roll Call & Welcome

Secretariat Emily Marx welcomed everyone to the meeting, reviewed the GBI Anti-Trust Policy, Code of Conduct policy and notified participants that the call was being recorded for the purpose of preparing minutes. No objections or concerns were raised.

Marx noted the three interest categories, General Interest, Producer, and User. She stated that there is balance on the Consensus Body for New Construction.

Administrative Items
Vice Chair Mike Lehman thanked everyone for attending the meeting. He reviewed the agenda and asked if anyone had any comments or concerns. There were no comments or concerns.

MOTION: A Motion was made, seconded, and carried unanimously to approve the agenda as presented.

Water Public Comment Review
The Water Subcommittee Chair and Secretariat reviewed each proposed revision and public comment before a motion was made.

NCWater-207, NCWater-208, NCWater-209, NCWater-210, NCWater-211, NCWater-212, NCWater-213, NCWater-214, NCWater-215, NCWater-222, NCWater-216, NCWater-217
NCWater-207 Proposed Revision: 4.1 Water Consumption ~~Features~~ (~~108~~ 61 POINTS)
4.1.1 Water Consumption ~~Features~~
Two paths are provided for assessing water consumption.
• 4.1.1A Path A: Water Consumption: Up to ~~108~~ 61 points
OR
• 4.1.1B Path B: Prescriptive: Up to ~~108~~ 61 points
Points cannot be combined between paths. Select one of the paths below.
NCWater-207 Reason: Red text not approved by Points & Water Subcommittee.

NCWater-208 Proposed Revision: 4.1.1A.1 PATH A: WATER CONSUMPTION
4.1.1A.1.1 Using the Green Globes Water ~~Consumption~~ Reduction Calculator, the expected indoor and outdoor water use is at least 10% less than the given baseline. Maximum = ~~108~~ 61 points
• ~~One hundred eight~~ Sixty-one points are earned for a project ≥60% lower than the baseline.
• ~~One hundred~~ Fifty-five points are earned for a building with consumption ≥55% to <60% lower than the baseline.
• ~~Ninety~~ Fifty points are earned for a building with consumption ≥50% to <55% lower than the baseline.
• ~~Eighty~~ Forty-five points are earned for a building with consumption ≥45% to <50% lower than the baseline.
• ~~Seventy~~ Forty points are earned for a project ≥40% to <45% lower than the baseline.
• ~~Sixty~~ Thirty-five points are earned for a building with consumption ≥35% to <40% lower than the baseline.
• ~~Fifty~~ Thirty- points are earned for a building with consumption ≥30% to <35% lower than the baseline.
• ~~Forty~~ Twenty-five points are earned for a building with consumption ≥25% to <30% lower than the baseline.

• ~~Thirty~~ Twenty points are earned for a building with consumption ≥20% to <25% lower than the baseline.
• ~~Twenty~~ Fifteen points are earned for a building with consumption ≥15% to <20% lower than the baseline.
• ~~Ten~~ Ten points are earned for a building with consumption ≥10% to <15% lower than the baseline.
• No points are earned for a building with consumption <10% lower than the median.
NCWater-208 Reason: Red text not approved by Points & Water Subcommittee.

NCWater-209 Proposed Revision: ~~9.1 INDOOR DOMESTIC PLUMBING (54 POINTS)~~
~~9.1.1 Plumbing Fixture and Fitting Standards~~
~~Where installed in the project and as permitted by local codes, plumbing fixtures and fittings are certified and listed as being compliant with the requirements of the U.S. EPA's WaterSense Program where WaterSense specifications exist.~~
~~Four paths are provided for assessing Indoor Domestic Plumbing.~~
~~• 9.1.1A Path A: ANSI/ASHRAE/ICC/USGBC/IES Standard 189.1-2017, Section 6.3.2.1: 52 points~~
~~OR~~
~~• 9.1.1B Path B: 2018 International Green Construction Code (IgCC), Table 601.3.2.1: 52 points~~
~~OR~~
~~• 9.1.1C Path C: 2020 IAPMO WEStand Section 402: 52 points~~
~~OR~~
~~• 9.1.1D Path D: Major Renovations: 45 points. Not an eligible path for New Construction.~~
~~Points cannot be combined between paths. Select one of the paths below.~~
~~OR~~
~~9.1.1B PATH B: 2018 INTERNATIONAL GREEN CONSTRUCTION CODE (IGCC), TABLE 601.3.2.1~~
~~9.1.1B.1 Plumbing fixtures and fittings comply with the 2018 International Green Construction Code (IgCC), Table 601.3.2.1. 52 points or N/A~~
~~• For points to be earned fifty percent of fixtures must comply.~~
~~o Points earned = percentage of compliant fixtures x 52 (fractional points are rounded upward)~~
~~• Not applicable where no fixtures or fittings exist.~~
~~• Not applicable where Path A, C or D is followed.~~
~~OR~~
~~9.1.1C PATH C: 2020 IAPMO WESTAND~~
~~9.1.1C.1 Plumbing fixtures and fittings comply with 2020 IAPMO WEStand, Section 402. 52 points or N/A~~
~~• For points to be earned fifty percent of fixtures must comply.~~
~~o Points earned = percentage of compliant fixtures x 52 (fractional points are rounded upward)~~
~~• Not applicable where no fixtures or fittings exist.~~
~~• Not applicable where Path A, B or D is followed.~~
~~OR~~
~~9.1.1D PATH D: MAJOR RENOVATIONS~~
~~9.1.1D.1 New construction is not eligible for Path D.~~
~~Points are earned when plumbing fixtures and fittings installed in the project meet or exceed~~

~~requirements for maximum water consumption as listed below and are certified as being compliant with the requirements of the U.S. EPA's WaterSense Program where WaterSense specifications exist.~~
~~• Toilets (Maximum flush volume 1.28 gal. (4.8 L) per flush);~~
~~• Urinals (Maximum flush volume 0.5 gal. (1.9 L) per flush);~~
~~• Showerheads (Maximum flow rate 2.0 gal. (7.6 L) per minute);~~
~~• Residential lavatory faucets (Maximum flow rate 1.5 gal. (5.7 L) per minute);~~
~~• Residential kitchen faucets (Maximum flow rate 2.2 gal. (8.3 L) per minute); and~~
~~• Non-residential lavatory faucets (Maximum flow rate 0.5 gal. (1.9 L) per minute).~~
~~• Pre-rinse spray valves (Maximum flow rate 1.28 gal. (4.8 L) per minute) Maximum = 45 points or N/A~~
~~• For points to be earned fifty percent of fixtures must comply.~~
~~o Points earned = percentage of compliant fixtures x 45 (fractional points are rounded upward)~~
~~• Not applicable where no fixtures or fittings exist.~~
~~• Not applicable where Path A, B or C is followed.~~
~~Complete regardless of the path chosen above.~~

NCWater-210 Proposed Revision: OR
4.1.1B PATH B: PRESCRIPTIVE (~~108~~ 61) POINTS
~~9.1.1A~~ 4.1.1B.1 ~~PATH A: ANSI/ASHRAE/ICC/USGBC/IES STANDARD 189.1-2017~~ PLUMBING FIXTURE AND FITTING STANDARDS
~~9.1.1A.1~~ 4.1.1B.1.1 Plumbing fixtures and fittings comply with one of the following:
• ANSI/ASHRAE/ICC/USGBC/IES Standard 189.1-2017, Section 6.3.2.1~~.~~
• 2018 International Green Construction Code (IgCC), Table 601.3.2.1
• 2020 IAPMO WEStand Section 402
OR
Points are earned for a major renovation when plumbing fixtures and fittings installed in the project meet or exceed requirements for maximum water consumption as listed below and are certified as being compliant with the requirements of the U.S. EPA's WaterSense Program where WaterSense specifications exist.
• Toilets (Maximum flush volume 1.28 gal. (4.8 L) per flush);
• Urinals (Maximum flush volume 0.5 gal. (1.9 L) per flush);
• Showerheads (Maximum flow rate 2.0 gal. (7.6 L) per minute);
• Residential lavatory faucets (Maximum flow rate 1.5 gal. (5.7 L) per minute);
• Residential kitchen faucets (Maximum flow rate 2.2 gal. (8.3 L) per minute);
• Non-residential lavatory faucets (Maximum flow rate 0.5 gal. (1.9 L) per minute); and
Pre-rinse spray valves (Maximum flow rate 1.28 gal. (4.8 L) per minute).
Maximum = 52 points or N/A
• For points to be earned fifty percent of fixtures must comply with one of the listed standards.
o Points earned = percentage of compliant fixtures x 52 (fractional points are rounded upward)
OR
• For points to be earned fifty percent of major renovation fixtures must comply.
o Points earned = percentage of compliant fixtures x 45 (fractional points are rounded upward)

• Not applicable where no fixtures or fittings exist.
~~• Not applicable where Path B, C or D is followed.~~
NCWater-210 Reason: Red text not approved by Points & Water Subcommittee.

NCWater-211 Proposed Revision: ~~9.1.2 RESIDENTIAL~~ 4.1.1B.2 INDOOR APPLIANCES
NCWater-211 Reason: Update all numbers in section.

NCWater-212 Proposed Revision: ~~9.1.2.2~~ 4.1.1B.2.2 Residential dishwashers are ENERGY STAR 6.0 labeled and possess a maximum water use of 3.5 gal per cycle (13.2 L per cycle) AND/OR commercial dishwashers comply with ENERGY STAR 2.0 requirements. Rackless flight-type dishwashers consume 160 gal/hr. (605.7 L/hr.) or less.
~~1~~ 2 points or N/A

NCWater-213 Proposed Revision: 4.1.1B.2.3 Self service clothes washers have an Integrated Water Factor (IWF) of 4.3 or less and comply with ENERGY STAR 8.0 requirements
2 points or N/A
• Not applicable where there are no clothes washers.
4.1.1B.2.4 Laundry equipment in industrial laundry facilities include the following features and systems:
• Clothes washers, tunnel clothes washers can be programmed to use a specific amount of water depending on the soil level of the material to be washed;
• Maximum water consumption of washers is 1.0 gal/lb. (8 L/kg); AND
• Washers have a water recycling system.
2 points or N/A
• Not applicable where there is no industrial laundry or where volumes do not exceed 350 lbs. (160 kg) per hour.
4.1.1B.2.5 In an on-premise/institutional laundry, non-residential clothes washers have a maximum IWF of 4.0.
2 points or N/A
• Not applicable where there are no non-residential clothes washers.

NCWater-214 Proposed Revision: • 9.4.1.2.3: Boilerless/connectionless food steamers comply with ENERGY STAR 1.2 requirements and consume 2 gal/hr./compartment (7.5 L/hr.) or less.
o N/A where there are no food steamers; and
~~• 9.4.1.2.4: Commercial dishwashers comply with ENERGY STAR2.0 requirements. Rackless flight-type dishwashers consume 160 gal/hr. (605.7 L/hr.) or less.~~
~~• N/A where there are no dishwashers; and~~
Maximum = ~~5~~ 4 points or N/A
NCWater-214 Reason: Moved to be under Indoor Appliances subsection of Path B. Update numbering of last option.

NCWater-215 Proposed Revision: ~~9.4.3 LAUNDRY EQUIPMENT~~
~~9.4.3.1 Self service clothes washers have an Integrated Water Factor (IWF) of 4.3 or less and comply with ENERGY STAR 8.0 requirements 2 points or N/A~~
~~• Not applicable where there are no clothes washers.~~
~~9.4.3.2 Laundry equipment in industrial laundry facilities include the following features and systems:~~
~~• Clothes washers, tunnel clothes washers can be programmed to use a specific amount of water depending on the soil level of the material to be washed;~~
~~• Maximum water consumption of washers is 1.0 gal/lb. (8 L/kg); AND~~
~~• Washers have a water recycling system. 2 points or N/A~~
~~• Not applicable where there is no industrial laundry or where volumes do not exceed 350 lbs. (160 kg) per hour.~~
~~9.4.3.3 In an on-premise/institutional laundry, non-residential clothes washers have a maximum IWF of 4.0. 2 points or N/A~~
~~• Not applicable where there are no non-residential clothes washers.~~
NCWater-215 Reason: Moved to be under Indoor Appliances subsection of Path B.

NCWater-222 Proposed Revision: 4.4 WATER INTENSIVE APPLICATIONS (14 ~~21~~ POINTS)
NCWater-222 Reason: Updating Header for point revision.

NCWater-216 Proposed Revision: 9.2 COOLING TOWERS (22 POINTS)
9.2.1 ~~4.1.1B.3~~ COOLING TOWERS
NCWater-216 Reason: Keep 9.2 Cooling Towers Separate, and not included in new Water Consumption pathway.

NCWater-217 Proposed Revision: ~~9.9 IRRIGATION (25 POINTS)~~
~~9.9.1~~ ~~4.1.1B.4~~ Irrigation
Complete regardless of the path chosen above. (After final section of pathway ends)
NCWater-217 Reason: Keep 9.9 Irrigation and do not include it in new Water Consumption pathway.

MOTION: The Motion was made and seconded to accept the proposed revisions, NCWater-207, NCWater-208, NCWater-209, NCWater-210, NCWater-211, NCWater-212, NCWater-213, NCWater-214, NCWater-215, NCWater-222, NCWater-216, and NCWater-217.
Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 9 in favor, 0 opposed, 0 abstained.

NCWater-206
Proposed Revision: 9.6.2 ALTERNATE WATER SOURCES ~~FOR NON-DOMESTIC FOR NON-POTABLE USE~~
Reason: Assessor Feedback: Would be more accurately described
MOTION: The Motion was made and seconded to accept the proposed revision.
Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 9 in favor, 0 opposed, 0 abstained.

NCWater-219

Proposed Revision: 4.7.1.5. Use tenant Metering or Sub-metering in multi-unit developments. Maximum = ~~10~~ 7 points or N/A

· ~~Ten~~ Seven points are earned when ≥90% of the units in the development are sub-metered and allow for tenants to view their consumption and be billed based upon it.

· ~~Seven~~ Six points are earned when ≥75% to <90% of the units in the development are sub-metered and allow for tenants to view their consumption and be billed based upon it.

· Five points are earned when ≥50% to <75%of the units in the development are sub-metered and allow for tenants to view their consumption and be billed based upon it.

· Two points are earned when ≥25% to <50%of the units in the development are sub-metered and allow for tenants to view their consumption and be billed based upon it.

· Not applicable where there is no multi-unit development.

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 9 in favor, 0 opposed, 0 abstained.

NCWater-222

Proposed Revision: 9.7 METERING (~~20~~ 17 POINTS)

Reason: Updating Header for point revision.

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 9 in favor, 0 opposed, 0 abstained.

NCWater-204

Proposed Revision: 4.9.1A PATH A: NO IRRIGATION SYSTEM IS INSTALLED

4.9.1B PATH B: IRRIGATION SYSTEM IS INSTALLED

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 8 in favor, 0 opposed, 1 abstained.

Abstain: Jeff Bradley

203-24

Public Comment: ~~9.1.1B PATH B: 2018 INTERNATIONAL GREEN CONSTRUCTION CODE (IGCC), TABLE 601.3.2.1~~

~~9.1.1B.1 Plumbing fixtures and fittings comply with the 2018 International Green Construction Code (IgCC), Table 601.3.2.1.~~

Reason: As of 2021 the IgCC, the fifth edition of the code, is co-developed by the ICC and American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE). 9.1.1A PATH A and 9.1.1B PATH B are essentially the same.

MOTION: The Motion was made and seconded to accept the public comment.

Discussion took place on the Motion:

- There was discussion on whether this would affect international projects, since IgCC is used only in the US and Canada.

WITHDRAWN: The Motion and second were withdrawn to allow GBI staff to research both standards.

203-25

Public Comment: 9.4.3.1 ~~Self service~~ *clothes washers*

Reason: Unclear. Does this mean only "self service" clothes washer have to comply and not the ones staff uses? Is that "non-residential" or "on-premise" or "institutional"?

Recommended Response: Thank you for your comment. Your comment has been rejected for the following reason: "Self service" is included in the definition and removing it could cause ambiguity.

MOTION: The Motion was made and seconded to accept the proposed response.

Discussion took place on the Motion:

- The definition of clothes washers was reviewed, and it was noted that self-service is in the definition.
- There was agreement that the term should be kept in the standard.

WITHDRAWN: The Motion and second were withdrawn

MOTION: The Motion was made and seconded to reject the comment and reply with the proposed response.

Discussion took place on the Motion:

- There was agreement on a response to the commenter.

VOTE: The Motion carries with 8 in favor, 0 opposed, 1 abstained.

Abstained: Jeff Bradley

NCWater-220

Proposed Revision: 9.9.1B.4: Sprinkler system is ~~inspected~~ <u>evaluated</u> for proper installation of all components specified on the irrigation plan and to assure that there is no runoff or overspray onto impervious surfaces.

2 points

• Two points are earned where there is a sprinkler system <u>evaluated</u> ~~inspection~~.

Reason: Word change

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 8 in favor, 0 opposed, 1 abstained.

Abstain: Jeff Bradley

203-24

Public Comment: ~~9.1.1B PATH B: 2018 INTERNATIONAL GREEN CONSTRUCTION CODE (IGCC), TABLE 601.3.2.1~~

~~9.1.1B.1 Plumbing fixtures and fittings comply with the 2018 International Green Construction Code (IgCC), Table 601.3.2.1.~~

Reason: As of 2021 the IgCC, the fifth edition of the code, is co-developed by the ICC and American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE). 9.1.1A PATH A and 9.1.1B PATH B are essentially the same.

Recommended Response: Thank you for your comment. Your comment has been rejected for the following reason: "Self service" is included in the definition and removing it could cause ambiguity.

MOTION: The Motion was made and seconded to reject the comment and reply with the proposed response.

Discussion took place on the Motion:

- It was noted that the IgCC standard is only used in the US and Canada.
- There was an agreement that both standards should be kept in the standard to allow clients to pick the best option for their project.

VOTE: The Motion carries with 8 in favor, 0 opposed, 1abstained.

Abstained: Jeff Bradley

General Public Comment Review

The Secretariat reviewed each proposed revision before a motion was made.

NCCB201

Proposed Revision: ~~MURB~~ ~~Mixed Use Multi-Family Building~~ mixed use multi-family and multi-family building

Reason: Replace MURB with a more familiar term in all instances

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 7 in favor, 0 opposed, 2 abstained.

Abstain: Jeff Bradley, James O'Brien

NCCB206

Reason: Update Definitions, Acronyms, and References according to what was approved in the body of the standard.

MOTION: The Motion was made and seconded to accept the proposed revision.
Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 8 in favor, 0 opposed, 1 abstained.
Abstain: Jeff Bradley

Site Public Comment Review
The Site Subcommittee Chair reviewed each public comment before making motion was made.

203-14
Public Comment: OR a Transit Score® is 70 or greater.
Reason: Since the Standard is using all the other WalkScore Index tools, this would be a good Option.
Recommended Response: Thank you for your comment. Your comment has been accepted and the changes have been implemented in the draft Standard.
MOTION: The Motion was made and seconded to accept the proposed response, but to restructure the standard so the criteria is listed as two pathways.
Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 8 in favor, 0 opposed, 1abstained.
Abstained: Jeff Bradley

201-1
Public Comment: 7.3.4.1 Roof: The building has a vegetated roof, is shaded during summer months, AND/OR has a roof with a high Solar Reflectance Index (SRI) as prescribed based on the slope of the roof. The solar reflectance and thermal emittance values that are used to obtain SRI shall be measured in accordance with ANSI/CRRC S100 or rated in accordance with the CRRC-1 Roof Program.

Where used to comply, shading trees are to be existing, non-invasive plants that are retained on site or newly, non-invasive planted trees that will provide shade within 10 years.

• For a roof slope less than or equal to 2:12, a minimum initial SRI of 78 or greater or a three-year aged SRI of 60 or greater;
• For a roof slope greater than 2:12, a minimum initial SRI of 29 or greater or a three-year-aged SRI of 25 or greater.
Reason: To help with compliance, we recommend adding a reference to the ANSI/CRRC S100 standard in Sections 2.3.4.1, 2.3.4.1.1, and 2.3.4.1.2 of the Technical Reference Manual for New Construction. The ANSI/CRRC S100 standard (https://coolroofs.org/resources/ansi-crrc-s100) is a commonly used technical resource for the radiative property testing and weathering of roofing materials. It is referenced in many national model codes and standards, including the International Energy Conservation Code, International Green Construction Code, RESNET Standard 301, and

ASHRAE Standard 90.1. It provides a standard and uniform practice for testing and weathering.

To further aid with compliance, we also recommend adding a reference to the CRRC-1 Roof Program in Sections 2.3.4.1, 2.3.4.1.1, and 2.3.4.1.2. The CRRC-1 Roof Program is a third-party product rating program for roofing products that is administered by the Cool Roof Rating Council (CRRC). The program has been in existence since 2002 and was developed with input from a wide array of stakeholders. The ratings are based on a product's initial and three-year aged surface radiative properties (solar reflectance and thermal emittance) and range from 0 to 1, with 1 being the most reflective or emissive. The ratings inform consumers how efficient the product is at reducing building energy use, increasing occupant comfort, and mitigating the urban heat island effect.

The rated products are published in the CRRC Rated Roof Products Directory (https://coolroofs.org/directory/roof), an online, publicly available database that policymakers, design professionals, building owners, and others have relied on for years for third-party data. The directory gives consumers the ability to search for and compare roofing products that comply with code requirements, green building certifications, and rebate programs. The ratings are also on CRRC labels found on product packaging

Recommended Response: Thank you for your comment. Your comment has been accepted with modification. Information on the name and version of the standard to reference was added for clarification.

The modification is below:

7.3.4.1 Roof: The building has a vegetated roof, is shaded during summer months, AND/OR has a roof with a high Solar Reflectance Index (SRI) as prescribed based on the slope of the roof. The solar reflectance and thermal emittance values that are used to obtain SRI shall be measured in accordance with ANSI/CRRC S100 (2021) or rated in accordance with the ~~CRRC-1 Roof Program~~ Cool Roof Rating Council, Roof Product Rating Program Manual CRRC-1 (2024).

Where used to comply, shading trees are to be existing, non-invasive plants that are retained on site or newly, non-invasive planted trees that will provide shade within 10 years.

• For a roof slope less than or equal to 2:12, a minimum initial SRI of 78 or greater or a three-year aged SRI of 60 or greater;
• For a roof slope greater than 2:12, a minimum initial SRI of 29 or greater or a three-year-aged SRI of 25 or greater.

MOTION: The Motion was made and seconded to accept with modification the proposed response.

Discussion took place on the Motion:

- It was argued that this is a good change and should be included but with the formal name of the references to provide greater clarification.

VOTE: The Motion carries with 9 in favor, 0 opposed, 0 abstained.

201-2

Public Comment: 7.3.4.3 Walls: At least 75% of opaque wall surfaces (by area) on the east, west, and south have a solar reflectance ~~index (SRI)~~ of ~~29~~ X or greater and thermal emittance of X or greater, are covered by or are designed to be covered by non-invasive vegetation AND/OR a vegetative wall during the summer months. New concrete or concrete masonry without additional colored pigment is deemed to comply without additional testing. The solar reflectance and thermal emittance values should be obtained in accordance with the CRRC-2 Wall Program.

Reason: The CRRC recommends replacing "Solar Reflectance Index" (SRI) with "solar reflectance" and "thermal emittance" in Section 7.3.4.3 Walls in the ANSI/GBI-01 (2021) standard because SRI is not an appropriate metric for vertical surfaces, such as walls. The standard for calculating SRI is ASTM E1980, which is limited in scope to horizontal and low-sloped opaque surfaces, as suggested by the title of the standard: Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces. There is movement to correct the inappropriate use of SRI for wall reflectance provisions among various codes and standards developers, including ASHRAE. For example, SRI has been replaced with solar reflectance (SR) and thermal emittance (TE) in ASHRAE Standard 90.1-2022.

The CRRC cannot comment on or recommend any specific SR and TE values that should be incorporated into the ANSI/GBI-01 standard. However, there are standards that specify minimum SR and TE values for exterior walls that could be helpful references. For example, ASHRAE replaced a minimum SRI of 29 with a minimum SR of 0.30 and minimum TE of 0.75 in the 2022 version of the 90.1 standard. That standard also requires at least 75% of the opaque wall area to have a minimum area-weighted initial SR to account for mixed materials on the building's facade.

We also recommend adding a reference to the CRRC-2 Wall Program, which covers the testing requirements for exterior wall materials in Chapter 3 and Appendix 1 in the CRRC-Wall Rating Program Manual, including the appropriate device settings for the accurate and proper reflectance measurements of vertical surfaces. Reason being that, although ASTM C1549 and C1371 are the appropriate test methods for many wall product types, the necessary device settings for vertical surfaces (walls) are not specified in those ASTM standards. The CRRC-2 details the necessary device settings, and also lists additional measurement device options (see S.2.2 Solar Reflectance Tests in CRRC-2, Appendix 1).

To aid compliance with the wall reflectance provisions in Section 2.3.4.3 of the Technical Manual, we recommend adding a reference to the CRRC-2 Wall Program (https://coolroofs.org/programs/wall-rating-program). The CRRC-2 Wall Program is a third-party product rating program for exterior wall materials that is administered by the CRRC. The program has been in existence since January 2022 and was developed with input from a wide array of stakeholders.

The rated products are published in the CRRC Rated Wall Products Directory (https://coolroofs.org/directory/wall).

The ratings are also on CRRC labels which may be found on product packaging (see below).

Recommended Response: Thank you for your comment. Your comment has been accepted with modification. Numbers were assigned that were consistent with the CRRC Wall program to add clarification.

The modification is below:

7.3.4.3 Walls: At least 75% of opaque wall surfaces (by area) on the east, west, and south have a solar reflectance ~~index (SRI)~~ of ~~29~~ ~~X~~ 0.60 or greater and thermal emittance of ~~X~~ 0.75 or greater, are covered by or are designed to be covered by non-invasive vegetation AND/OR a vegetative wall during the summer months. New concrete or concrete masonry without additional colored pigment is deemed to comply without additional testing. The solar reflectance and thermal emittance values should be obtained in accordance with the CRRC-2 Wall Program.

MOTION: The Motion was made and seconded to accept with modification the proposed response.

Discussion took place on the Motion:

- It was argued that this is a helpful change but that specific numbers should be noted that are consistent with the original intent of the criteria.

VOTE: The Motion carries with 8 in favor, 1 opposed, 0 abstained.

Opposed: Jeff Bradley

203-15

Public Comment: Hardscape surfaces with ~~a solar reflectance index (SRI) of 29 or greater.~~ an initial SR of at least 0.28 as measured in accordance with ANSI/CRRC S100. New concrete and concrete masonry without additional colored pigment are deemed to comply without additional testing.

Reason: NRMCA is supportive of maintaining the Heat Island mitigation section. However, for hardscapes, Solar Reflectance (SR) is a better way to measure materials with more thermal mass, for nonroof materials than SRI. SR is the fraction of solar energy that is reflected by a surface on a scale of 0 to 1. It doesn't factor in emissions of thermal radiation the way SRI does. Emissivity is a material's ability to release absorbed energy.

https://www.cement.org/docs/default-source/fc_concrete_technology/sn2982a-solar-reflectance-values-of-concrete.pdf

Recommended Response: Thank you for your comment. Your comment has been accepted with modification. Information on the name and version of the standard to reference was added for clarification.

The modification is below:

Hardscape surfaces with ~~a solar reflectance index (SRI) of 29 or greater.~~ an initial Solar Reflectance (SR) of at least 0.28 as measured in accordance with ANSI/CRRC S100 (2021). New concrete and concrete masonry without additional colored pigment are deemed to comply without additional testing.

MOTION: The Motion was made and seconded to accept with modification the proposed response.
Discussion took place on the Motion:

- It was argued that SR and SRI are different, and this revision would change the original intent of the criteria.
- A formal reference was added to the public comment to add clarification.
- It was noted that this revision would greatly change the criteria because it is intended to be on heat island effect and the revision would not consider thermal radiation.

VOTE: The Motion carries with 8 in favor, 1 opposed, 0 abstained.
Opposed: Jeff Bradley

NCCB205
Proposed Revision: 7.3.5.1 ~~Measures to address bird strike~~s ~~strikes~~ An assessment of potential bird strike conditions and mitigating measures is conducted. It shall include, but ~~are~~ not be limited to the portions of buildings most likely to sustain bird strikes. This area begins at grade and extends upwards for 60 feet. This zone also applies to glass façades directly adjacent to large landscaped roofs (two acres or larger) and extending upward 60 feet from the level of the subject roof. Mitigation measures to be assessed include:~~following~~:
Glass and Façade Treatments:
• Fritted and Frosted Glass
• Angled Glass
• Ultra-Violet Glass
• Film and Art Treatment of Glass
• External Screens
• Architectural Features
• Netting
Other Considerations:
• Wind generators
• Lighting Treatments
• Location-~~R~~related ~~H~~hazards where~~:~~
~~•~~ ~~B~~buildings are located inside of, or within sensitive areas for avian wildlife (e.g. a clear flight path of less than 300 feet from an Urban ~~Bird~~ Wildlife Refuge, as designated by local government). ~~(defined below) require treatment when:~~
~~o New buildings are constructed~~
~~o Additions are made to existing buildings (Note: only the new construction will require treatment)~~
~~o Existing buildings replace 50% or more of the glazing within the "bird collision zone" on the façade(s) facing the Urban Bird Refuge~~
~~Bird Collision Zone:~~
~~The portion of buildings most likely to sustain bird strikes. This area begins at grade and extends upwards for 60 feet. This zone also applies to glass façades directly adjacent to large landscaped roofs (two acres or larger) and extending upward 60 feet from the level of the subject roof.~~
Maximum = 4 points

~~• 3 points are earned for implementing measures identified in 7.3.5.1.~~
•~~1~~ 2 point ~~is~~ are earned for assessing and reporting on the design analysis for bird safety.
• 2 points are earned for implementing feasible mitigation measures identified in the report.
Reason:
MOTION: The Motion was made and seconded to accept the proposed revision.
Discussion took place on the Motion:

- There was discussion on the revision and what was moved within the criteria versus removed entirely.
- It was argued that the criteria should be about the building itself and not the location. There was discussion on removing the Urban Wildlife Refuge. There was agreement to broaden the criteria but provide the existing language as an example.

VOTE: The Motion carries with 9 in favor, 0 opposed, 0 abstained.

203-22
Public Comment: …recent International Wildland-Urban Interface Code ~~(2015).~~
Reason: The most recent edition is 2021.
Recommended Response: Thank you for your comment. Your comment has been accepted with modification. It was modified to reflect that facilities should not have to be required to comply with two different versions but what is adopted by the local governing authority or the most recent version.

The modification is below:

…recent International Wildland-Urban Interface Code ~~(2015).~~

Where a Wildland Urban Interface Code has been adopted OR there is a determination by a fire protection engineer or certified fire marshal that the site wildland-urban interface hazard is moderate, high or extreme;
AND
The project achieves points for 7.2.1.1 or 7.2.1.6 or is within 0.25 mi (0.4 km) walking distance of developed residential land of at least 8 dwelling units per acre;
AND
The site is designed to comply with the most recent International Wildland-Urban Interface Code or the version adopted by the local governing authority ~~(2015)~~;
AND
Excluding athletic fields and agriculture, greater than 50% of the vegetation on site achieves points for Section 7.5.1.2 for drought tolerant plants, and greater than 50% of the vegetation on site achieves points for Section 7.5.1.3 for native plants.
AND
A fire protection engineer or certified fire marshal has inspected the completed site within 90 days prior to project certification or re-certification and found it compliant with the most recent

International Wildland-Urban Interface Code or the version adopted by the local governing authority ~~(2015)~~.

MOTION: The Motion was made and seconded to accept with modification the proposed response.

Discussion took place on the Motion:

- Changes were made to require clients to be in compliant with the most recent version or the version adopted in their local jurisdiction.
- A reason to the commenter was developed and agreed upon.

VOTE: The Motion carries with 8 in favor, 0 opposed, 1 abstained.

Abstain: Jeff Bradley

Public Participation

There was no public participation.

New Business

NCCB207

Proposed Revision: ~~2018~~ 2021 International Green Construction Code (IgCC), Table 601.3.2.1

Reason: Update 2018 International Green Construction Code (IgCC), Table 601.3.2.1 to 2022

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- It was noted that staff should confirm that the table number has not changed.

VOTE: The Motion carries with 9 in favor, 0 opposed, 0 abstained.

Review Schedule

GBI staff reminded attendees to complete the meeting poll that was emailed previously to allow staff to plan the next meeting.

MOTION: The motion was made, seconded, and carried unanimously to adjourn.

Meeting adjourned at 2:18 PM EST.