

Minutes

GBI Consensus Body Meeting #31

BSR/GBI 01-2016

In-person in Chicago and Webinar

Wednesday, May 17th, 2017, from 2:00 PM CT to 7:00 PM CT

Thursday, May 18th, 2017 from 8:00 AM to 6:00 PM CT

Friday, May 19th, 2017 from 8:00 AM to 12:00 Noon CT

Attendance:

No	Name	Organization(s)	5-17-17	5-18-17	5-19-17			
1	Gregg Bergmiller	S/L/A/M Collaborative	X	X	Absent			
2	Paul Bertram	PRB Connect	X	X (by proxy)	X (by proxy)			
3	Allan Bilka	International Code Council	X	X	X			
4	Jeff Bradley	American Wood Council	X	X	X (by proxy last 2 hours)			
5	William Carroll	American Chemistry Council	X	X	Absent			
6	John Cross	American Institute of Steel Construction	X	X	X			
7	Mike Cudahy	Plastic Pipe and Fittings, Association	X	X	X			
8	Chris Dixon	NBBJ (rep. self)	X	X (by Proxy)	X (by Proxy)			
9	Nicole Dovel-Moore	CTA Architects Engineers	X	X	X			
10	David Eldridge	Grumman/Butkus Assoc.	X	X	X			
11	William Freeman	Resilient Floor Covering Institute	X	X	X			
12	Susan Gitlin	U.S. EPA	X	X (partial proxy)	X (partial proxy)			
13	Don Horn	GSA	X	X	X			
14	Josh Jacobs	UL Environment	X	X	Absent			
15	Greg Johnson	Johnson Consulting	X	X	X			

		Services, Greenscape Alliance						
16	Karen Joslin	Joslin Consulting	X	X	X			
17	Malee Kaolawanich	NIH (rep. self)	Absent	Absent	Absent			
18	Rachel Minnery	AIA	X	X (partial proxy)	X (partial proxy)			
19	Charles Kibert	University of Florida	X (Chair)	X	X (Chair for part of the meeting)			
20	Gary Keclik	Keclik Associates	X	X	X			
21	Thomas Pape	Alliance for Water Efficiency	X	X	Absent			
22	Tien Peng	National Ready Mix Concrete Assn.	X	X	X			
23	Jane Rohde	JSR Assoc. Inc., Vinyl Institute	X (by Proxy)	X (by Proxy)	X (by Proxy)			
24	Gord Shymko	G.F. Shymko & Associates, Inc.	X	X	X			
25	Kent Sovocool	Southern Nevada Water Authority	X	X	X			
26	Steve Strawn	JELD-WEN	Absent	Absent	Absent			
27	George Thompson	Chemical Compliance Systems, Inc.	X (by Proxy)	X (by Proxy)	X (by Proxy)			
28	Angela Tin	American Lung Assn.	X	X	X			
29	Douglas Tucker	Misubishi Electric Cooling & Heating	X	X	X			
Voting Alternates								
	Abby Brokaw	American Lung Assn. (voting Alternate for Angela Tin)						

	Paul Karrer	AIA (Alternate for Rachel Minnery)						
	Bill Hoffman	UL Environment (Voting Alternate for Josh Jacobs)						
	Lance Davis	GSA (Voting Alternate for Don Horn)						
	D'Lane Wisner	D'Lane Wisner (Voting Alternate for William Carroll)						
TOTALS			27/29	27/29	23/29			
	Visitors							
	Martha VanGeem	Self (Principal Engineer)	X	X	X			
	Ric Doedens	Logison			X			
	Richard Willis	NAPA	X	X				
	Kyle Thompson	IAPMO	X					
	Niklas Moeller	LogiSon			X			
	Staff/Consultants							
	Michael Lehman	Chair	Absent	X	X			
	Vicki Worden	Executive Director, GBI						
	Emily Randolph	Secretariat Asst., GBI	X	X	X			
	Micah Thomas	Staff, GBI	X	X	X			
	Maria Woodbury	Secretariat, GBI	X	X	X			
	Kim Goldsworthy	Roberts-Rules Consulting	X	X	X			

Wednesday, May 17, 2017

Welcome & Roll Call

Secretariat, Maria Woodbury welcomed participants and conducted roll call to establish quorum. The anti-trust statement and code of conduct were reviewed and participants were requested to comply with both fully.

Woodbury reminded members that all are welcome to participate in the discussion provided participants raise their hands. Hands will be called on first come-first serve. In-person participants were asked to restate their name before speaking each time to make it easier for remote participants to follow along.

On the first day of this meeting, no members voted using voting alternates and 3 members voted using a proxy (Bill Freeman for George Thompson, Jeff Bradley for Jane Rohde, and Tien Peng for Rachel Minnery for part of the meeting).

Administrative Items

Vice Chair Charles Kibert assumed the Chair of the meeting and made his opening comments, thanking everyone for their time and expertise. Kibert provided an overview of the agenda for the day and reminded members that discussion will be lead in the order hands are raised.

MOTION: The Motion was made and seconded to approve the minutes from Meeting #30 on April 10th and April 11th, 2017.

Discussion took place on the Motion:

- Woodbury pointed out one editorial error that was brought to Staff's attention prior to the meeting: on page 26 of the Meeting #30 minutes, "Amended" under the vote tallies, should be "Abstained".
- A request was made that information be added under the Points Task Group Update to reflect the slides presented regarding potential problems with the Points Allocation System. The speaker was against approving minutes due to inaccuracy until such time as the minutes could be updated.
- The Parliamentarian was consulted on how to handle the approval of the minutes and he recommended holding the vote to approve the minutes as-is and stated that the minutes could be later amended to reflect the requested changes.

VOTE: The Motion carried with 19 in favor, 2 opposed, and 3 abstained.

Opposed: Susan Gitlin, Karen Joslin

Abstained: Mike Cudahy, Don Horn, Josh Jacobs.

Complaints of Code of Conduct concerns:

Woodbury reported that Staff have received a number of complaints regarding violations of the Code of Conduct following the last Consensus Body Meeting. Woodbury reminded participants of the following remedies for disrespectful behavior:

- Everyone is entitled to express opinions and participate.
- If you disagree, the proper way to pursue respectful discussion is to speak for or against an item on the floor.
- It is improper to bring debate outside of meetings to people who have not participated in the process. To bring in outside expertise, it is proper to make a request to the Chair.
- No one should be ridiculed for their vote or intimidated based on a vote cast.
- Avoid commenting on someone's personal motivations. Everyone has something they hope to accomplish in meetings.

- Avoid venting in emails. If you need to pursue resolution to a conflict request intervention by the chair, secretariat, or parliamentarian. The secretariat can also provide consultation on appointing a neutral party to help resolve conflicts that arise.

Concern about Dominance:

Woodbury reported that following a complaint, the Subcommittee Chairs met to discuss the issue of Industry Dominance in the GBI ANSI process. It was stated that in GBI's procedures, members representing a trade or industry are placed in the General Interest Category. It was stated that currently 1/3 of the Consensus Body member represent Industry.

The group convened to address the dominance concern issued the following statements:

- This group finds that the balance is currently equitable and in the future we will continue to add members with consideration for appropriate representation between groups.
- We find that the elements of dominance have not been demonstrated and we will continue to evaluate participation in the Consensus Body with this concern in mind.

Discussion took place:

- One member stated that they counted the representation of Industry differently and was still concerned about the imbalance.
- The question was raised about changing the Interest Categories to be more transparent. It was clarified that GBI cannot change its procedures during the revision cycle, but this is a discussion that could be had after the completion of this revision cycle.
- It was stated that it's not always clear when someone speaks if they're speaking on behalf of themselves or an industry/organization's behalf. Others agreed that it's important to know a speaker's/commenter's background.

Concerns about Interruptions

Staff worked with the Parliamentarian to propose applicable best practices to avoid interruptions and to ensure smooth discussion. These included allowing people to work on an Amendment during discussion so they can bring it fully drafted to the table and allowing everyone to have the opportunity to speak prior to allowing speakers to speak a second time.

Participants were asked for their input regarding other methods that could be used to make the meetings run more smoothly.

One participant stated that attempting to interpret what another speaker meant is problematic and potentially puts words into speaker's mouths that they did not intend. It was stated that it would be better to ask clarifying questions of the previous speaker.

Points Update: The Points Task Group was re-constituted per the motion carried during GBI Consensus Body Meeting #30 to adopt Option 3.

Recommendation: The Re-constituted Points Task Group voted to keep the current point allocation among Assessment Areas. There will be consideration for minor adjustments to point totals within each Section.

Re-constituted Task Group VOTE: 4 in favor, one opposed, and none abstained.

Note: Another motion was made to request the Consensus Body find a way to allocate points to the new Resilience Section within the Project Management Assessment Area. The motion received no second.

MOTION: The Motion was made and seconded to approve the Re-constituted Points Task Group's decision.

Discussion took place on the Motion:

- It was stated that the motion did not carry unanimously.
- Clarification was requested on the meaning behind "have point fundings". It was stated that Subcommittees need to resolve the points in places where criteria have been added or removed. The question was raised about how the Task Group's recommendation aligns with what the Consensus Body asked them to do. It was stated that the Consensus Body voted to pursue option 3, "Points Task Group is re-constituted to review the initial point allocation process to determine if the current point system is appropriate. Task group reviews original criteria of the Analytical Hierarchy Process to determine if changes should be made to the current point allocation system, with emphasis on identifying criteria that have cross-category implications. If changes are necessary, the Task Group would adjust allocation and recommend new point allocation to the Consensus Body."
- One person speaking in opposition to the motion stated that 1 point out of 1000 is better than fractional points. The speaker asked to what degree the various options were identified and how those items will be addressed in the Motion presented. Overall, the speaker stated their opinion that this decision on a Motion was rushed. Concern was raised that the Points Task Group only addressed a portion of their mandate.
- It was also stated that each Subcommittee should be responsible for looking at the points within its Assessment Area and making sure the points were allocated properly. It was clarified that there were no recommendations from the Task Group on Points Allocation within each Assessment Area. It was stated that Subcommittees should review points internally. It was stated that points need to be balanced at the end because it's subjective and the language needs to be settled on and then the points need to be redistributed as appropriate for the Assessment Area. There was agreement that points cannot be allocated until it's known what the final criteria will be. It was stated that granular point allocation should be determined the Subcommittees.
- Concern was raised that under Resilience, there is a lot of work that needs to be done, but only 4 points are available. The speaker was unsure how to address this problem.
- Concern was raised about diluting the weight of criteria by adding more requirements but leaving the points the same. When criteria have similar benefits they should have similar points regardless of Assessment Area where they appear.
- One speaker in favor of the motion stated that the current points structure makes this Standard by far the most progressive compared to former versions of the Standard and other green building certification programs. The speaker stated that they had initially intended to vote against the motion in the Points Task group, but after comparing the points to other options available, now supports the motion.
- It was pointed out that the Water Efficiency Assessment Area had more points to work with prior to the decision to exclude prerequisites.
- It was clarified that there are currently 1000 points available. There was a question raised around whether points should change between Assessment Areas which is not addressed by this motion.

- It was clarified that GBI intends to put the Standard through a pilot program before it's officially implemented to determine where there may be difficulties.
- It was requested that the Secretariat send out a more granular breakdown of the points.
- The question was raised regarding whether there are any points being given for items covered under code.

VOTE: The Motion carried with 19 in favor, 4 opposed, and 1 abstained.

Opposed: Karen Joslin, Don Horn, Susan Gitlin, Josh Jacobs

Abstained: Allan Bilka

MOTION: The Motion was made and seconded that each Subcommittee look at their allocated points and ensure that within each Assessment Area, the points are allocated appropriately and report to the Consensus Body for final approval. To be produced in a timely manner.

AMENDMENT: The amendment was made and seconded to change "in a timely manner" to "before this goes out to public comment."

There were no Objections to the Amendment.

VOTE: The Motion carried with 20 in favor, 1 opposed, and 3 abstained.

Opposed: Jeff Bradley

Abstained: Karen Joslin, Jane Rodhe, Josh Jacobs

It was clarified that there are no action items for the Points Task Group at this time and that the Subcommittees will first need to examine their point allocation.

The Minutes from the Points Task Group meeting were requested

Staff clarified in response to a complaint that the Chair is only speaking when his place in the queue is reached. Despite not being able to vote, nor being able to alter the outcome of the motion, the Chair is still able to speak. Per GBI procedures, the Chair is only able to vote if there is a tie.

Second Public Comment Period

Project Management:

Presented by Subcommittee Chair Karen Joslin

Minnery Affirmative Letter Ballot Comment. 5.1:

- **Reason or Comment:** Definitions for the below terms need to be added to the document: Add: vulnerability assessment
Add: resilience Add: climate and weather-related hazards Add: technological and anthropogenic hazards
Add: geologic and seismic hazards
- **Revision Requested:** Left blank by commenter
- **Recommended Response (From Task Group):** Thank you for your comment. Your comment has been rejected for the following reason: The definitions are included in the language of the criteria.
- **Task Group vote:** 5 in favor, 1 opposed, 1 abstained

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

Discussion took place on the Motion:

- An editorial change was requested to remove “for the following reason,” when rejecting a comment. It was stated that it was unnecessary.

VOTE: The Motion carried with 17 in favor, none opposed, and two abstained

Opposed: None

Abstained: Susan Gitlin, Rachel Minnery

8.5. Editorial. 5.1:

- **Comment: integrated design process (IDP):** an ~~holistic~~ approach to project design and planning where project team members from multiple disciplines work together throughout the ~~project~~ design and delivery process. ~~It that~~ that emphasizes goal setting, clear and ongoing communication, attention to detail, and active collaboration among team members with the objective of achieving holistic solutions.
- **Reason:** It is duplicative to say the phrases *holistic* and *project design* in two consecutive sentences of the same definition. The proposed revision combines the two sentences into one and removes the repetitive language.
- **Recommended Response (From Subcommittee):** Thank you for your comment. Your comment has been accepted with modification. “Holistic” and “project” will not be eliminated but the sentences will be combined as follows: “...and delivery process; this emphasizes...” The Consensus Body thinks the modifiers are necessary for clarity.

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

VOTE: The Motion carried with 20 in favor, 1 opposed, and none abstained.

Opposed: Don Horn

Abstained: None

22.19. Substantive. 6.1.1:

- **Comment:** Remove references to traditional design stages related to design-bid-build construction projects. Change 4th bullet in right column to read: Five points are earned for a written plan and contract ~~for the work~~ for post-occupancy review and assessment.
- **Reason:** This section encourages traditional design-bid-build projects due to the terminology and point awards. What happens if indoor environment goals only address one sub-bullet or don’t address all 4 sub-bullets?
- **Recommended Response (From Subcommittee):** Thank you for your comment. Your comment has been accepted with modification. 1.) The addition of “post-” and the striking of “for the work” are accepted. 2.) There was significant discussion about the inclusion of the design stages and the Consensus Body does not believe this elevates one delivery method over another. 3.) The sub-bullets are expected to be part of the goal setting strategy.

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

Discussion took place on the Motion:

- There was concern about the language choice “milestones”. It was clarified that these are actual points in time/specific milestones during the project.

VOTE: The Motion carried with 20 in favor, 2 opposed, and none abstained.

Opposed: Don Horn, Susan Gitlin

Abstained: None

22 – 10. Substantive. 6.1.3:

- **Comment:** Project Specific Design Parameters and recommended documentation should be deliverables which demonstrate the base state and choices taken in design or decadal steps to monitor or adapt to changing climate conditions.
- **Reason:** Does the project provide energy and water surety? Does the project support passive survivability? Is the project designed to adapt to changing climate conditions or is the project designed for the climate at the end state of its useful life? How are these factors incorporated into the asset management/decadal capital planning if the project is not designed for the end of life climate.
- **Recommended Response (From Task Group):** Thank you for your comment. Your comment has been rejected for the following reason: The documentation requested is considered suitable given the intent and tenets of the criterion (i.e. the criteria rely on the project team to identify the project-specific risks).
- **Task Group Vote:** 7 in favor, none opposed, 3 abstained.

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

VOTE: The Motion carried with 19 in favor, 2 opposed, and 1 abstained.

Opposed: Don Horn, Susan Gitlin

Abstained: Rachel Minnery

After the motion it was stated that it would be good to include Case Studies for the Technical Manual.

8 – 15. Substantive. 6.1.1:

- **Comment:** **Building Resilience** is cited as a listed item however nowhere in this Standard is the phrase defined. In a professional culture where many remain uniformed about what constitutes *resilient design* and others are unable to distinguish between *sustainability* and *resiliency*, this is a tremendous oversight.
- **Reason:** Extensive research and development has taken place regarding resiliency as a design philosophy over the last four years. If the Standard is actively trying to embrace this concept, it must be clearly defined and understood therein. Section 6.1.3 is a huge advancement in this agenda as it relates to credit assignment, but the of the larger definition remains.

17 – 1. Substantive. 6.1.1/6.1.3:

- **Comment:** Add Definition: **resilience:** the ability of a building to withstand, recover, and maintain occupancy from hazards and events identified in a risk assessment.
- **Reason:** Resilience is used twice in the document, once in a new section, and while I think we all want resilience, no one will have the same definition, unless we supply one.

Minnery. 6.1.1.1:

- **Reason or Comment:** “Building Resilience” is undefined and vague. What is the building resilient to? Defining disaster-related hazards, as suggested to the right, will reduce confusion with materials risk assessment.
- **Revision Requested:** Change “Building Resilience” bullet point to: “Resilience: climate and related technological anthropogenic and geologic and seismic hazards”
- **Recommended Response (From Task Group):** Thank you for your comment. Your comment has been accepted with modification. There were multiple comments dealing with the definition in this section. The Consensus Body has taken all of those comments into consideration and drafted a revised definition: “The ability of a building and project site to withstand and recover rapidly from changing conditions and adverse events.”
- **Task Group Vote:** 9 in favor, none opposed, 1 abstained.

MOTION: The Motion was made and seconded to accept the recommended responses.

Discussion took place on the Motion:

- It was clarified that this definition is a combination of several other definitions.

AMENDMENT: The Amendment was made and seconded to change “and” to “or” so the language reads “withstand or recover”.

There was Opposition to the Amendment.

Discussion took place on the Amendment:

- Concern was raised about using “or” as none of the definitions the speaker had seen contained an “or”. It was stated that using “and” means the two halves could be mutually exclusive which is not the intent. The speaker was in favor of changing “and” to “or”. Concern was raised that “or” implies mutual exclusivity.
- Concern was raised that “changing events” is too vague. A distinction was made that a building can be recovered, but doesn’t recover itself. The concern was reiterated that change of conditions and adverse events is vague. It was suggested that there should be more specificity. The question was raised about including financial conditions.
- It was stated that the building has to withstand the event to earn the point if it says “and”.
- It was stated that the Subcommittee needs to ensure that points reflect “and”.
- The question was raised whether it could be changed to “and/or”.
- It was stated that the term “withstand” needs to be defined, otherwise, it’s important to keep “and”. Even if the building withstands, there could be other issues (e.g. electrical and HVAC).
- Confusion between withstanding and not having damage was raised. The speaker agreed that “and” is appropriate language.

VOTE: The Amendment failed with 10 in favor, 10 opposed, and 3 abstained.

Tie-Breaker: Chair opposed

Opposed: Don Horn, David Eldridge, Tien Peng, Gary Keclik, Gord Shymko, John Cross, Karen Joslin, Gregg Bergmiller, Josh Jacobs Rachel Minnery

Abstained: Chris Dixon, Paul Bertram, Kent Sovocool

Discussion took place on Motion:

- Concern was raised about the word “rapidly” and the question was asked whether it’s essential.
- It was stated that the cost of resilience is related to how quickly the building is restored back to service. It was suggested that perhaps there is a better word than resilience.
- A speaker in favor of keeping “rapidly” stated that more definitions say “rapidly”.

AMENDMENT: The Amendment was made and seconded to change the proposed language from “and” to “and/or”.

Discussion took place on the Amendment:

- It was stated that “and/or” effectively means “or” and that amendment has already been voted down.
- It was stated that if the goal was only to recover rapidly, the word “or” makes it a very difficult standard to evaluate. The speaker was against using “or” in any capacity.

VOTE: The Amendment failed with 6 in favor, 15 opposed, 2 abstained.

Opposed: Don Horn, David Eldridge, Tien Peng, Gary Keclik, Gord Shymko, John Cross, Karen Joslin, Bill Freeman, George Thompson, Angela Tin, William Carroll, Paul Bertram, Rachel Minnery, Gregg Bergmiller

Abstained: Chris Dixon, Susan Gitlin

Discussion took place on the Motion:

- It was stated that the terminology should be changed to “recover in a timely manner” instead of “recover rapidly”.

AMENDMNET: The Amendment was made and seconded to change “rapidly” to “recover in a timely manner.”

There were Objections to the Amendment.

Discussion took place on the Amendment:

- The opinion was put forward that “readily” is a better word choice than “rapidly”.
- It was stated that resilience and adaptability are separated by AIA. It was stated that the propose of the modification was to say “to stand and recover rapidly from adverse events, and adaptable to changing conditions” The speaker stated their desire to move a separate Amendment.

AMENDMENT TO THE AMENDMNET: The amendment was made and seconded to change “rapidly” to “readily.”

There were Objections to the Amendment to the Amendment

Discussion took place on the Amendment to the Amendment:

- Speaking in opposition to the amendment to the amendment, it was stated that this change neutralizes the term.

VOTE: The Amendment to the Amendment failed with 9 in favor, 10 opposed, 2 abstained.

Opposed: Don Horn, Tien Peng, Gord Shymko, Karen Joslin, Bill Freeman, George Thompson, Josh Jacobs, Susan Gitlin, Paul Bertram, Rachel Minnery

Abstained: Gary Keclik, Kent Sovocool

Discussion took place on the original Amendment:

- It was stated that from an assessment standpoint, the word choice really matters.

VOTE: The Amendment failed with 9 in favor, 10 opposed, 3 abstained.

Opposed: Don Horn, Tien Peng, Kent Sovocool, Gord Shymko, John Cross, Karen Joslin, Josh Jacobs, Susan Gitlin, Paul Bertram, Rachel Minnery

Abstained: David Eldridge, Greg Bergmiller, Chris Dixon

Discussion took place on the Motion:

- There was discussion about inserting “environmental conditions” and the option of inserting “adapting to changing conditions”. It was stated that if a project team is working on this certification, the team is already taking the steps on “adapting to changing conditions”. It was stated that the specified language is unnecessary.
- A suggestion was made to add in the language “withstand and recover rapidly from adverse events and adapt to changing environmental conditions”.
- It was stated that it isn’t safe to assume a 50 year building is safer than a 25 year building. Concern was expressed about a building’s adaptability. It was stated that “Adaptability” might not be a bad thing for builders to be thinking about things coming up on the horizon. The example was given that in Florida, you can design a baseline elevation of 3 feet above whatever the flood level is. To build 5 feet more, is an example of how one would meet this requirement with adaptability.
- The sentiment was echoed about removing “environmental conditions”, but adaptability and changing conditions doesn’t pertain to the future, it is relevant today. Building codes aren’t up to current extreme conditions.
- Concern was raised that this sentence is too subjective. The question was raised about what is doing the withstanding and what “recover” and “adaptability” mean. The question was raised if

“adaptability” means anticipating a change or does it mean a building that needs to be able to physically change over time. It was stated that this is a definition from the term “Building Resilience”. It’s a general, higher level definition pulled from the Standard.

- It was stated that taking “environmental conditions” out broadens the definition a lot to social and economic spectrum. The speaker was against removing that language.
- There was discussion about whether there should be a definition.
- The Consensus Body was reminded that the Resilience Task Group was in full support of this definition with 9 in favor, none opposed, and 1 abstained.

AMENDMENT: The Amendment was made and seconded to use the amended definition “the ability of a building and project site to withstand and recover rapidly from adverse events and to adapt to changing environmental conditions”

There were Objections to the Amendment.

VOTE: The Amendment carried with 17 in favor, 3 opposed, and 1 abstained.

Opposed: Allan Bilka, Gord Shymko, Chris Dixon

Abstained: Jeff Bradley

Discussion took place on the Amended Motion:

- It was clarified that this response applies to 3 comments.
- It was stated that this isn’t a “revised” definition and it was suggested that “revised” be removed from the response. There were no objections to this editorial change.

VOTE: The Motion carried with 16 in favor, 2 opposed, and 2 abstained.

Opposed: Allan Bilka, Gord Shymko

Abstained: Chris Dixon, Paul Bertram

Energy:

Presented by Subcommittee Chair David Eldridge

Energy Subcommittee member, Gord Shymko gave a presentation on the pathway analysis that GBI commissioned to determine the equivalency of the pathways. Shymko reminded the Consensus Body that in the previous version of Green Globes there were two performance paths for 300 points and Prescriptive Path for 250 points.

Shymko stated that currently in Green Globes there is a hybrid of the two. They are comingled and that the revised draft Standard is closer to the original 2010 model.

Discussion took place on the Presentation:

- The question was raised if the Prescriptive Path is given the same amount of points and if there should be a Prescriptive path. It was stated that there was discussion at the Subcommittee level whether it should just be Energy modeling instead of Prescriptive. It was stated, that currently the Standard is trying to accommodate both.
- It was clarified that the analysis was initiated 5-6 weeks ago and will be discussed at the next Energy Subcommittee meeting once the analysis is complete.
- The question was raised if new the new ASHRAE Standard meets performance requirements. It was clarified that ASHRAE codes are advancing but building codes go by state or municipality. It was clarified that it doesn’t need to be 2016, just a baseline.
- It was stated that this was a comment that was returned with a Negative vote on the Letter Ballot. The report should be ready for the Energy Subcommittee to review in 5-6 weeks. It’s expected that the review will line up with the other Subcommittees addressing final comments.

8 – 7. Editorial 5.1:

- **Comment: on-site renewable energy:** energy derived from sun, wind, water, the Earth's core, and biomass from recovered waste sources that is captured, stored and used on the building site, using such technologies as wind turbines, photovoltaic solar panels, transpired solar collectors, solar thermal heaters, ~~and~~ small-scale hydroelectric power plants, fuel cells, and ground-source heat pumps.
- **Reason:** Grammatically a definite article (i.e. *the*) should appear before the proper noun of the planet Earth. The new content of the broader definition is acceptable however it seems unjustified to remove the last two technologies reference. Fuel cells are clearly a storage device and ground-source heat pumps are a highly effective means of capturing on-site energy. What benefit is served by their omission?
- **Recommended Response (From Chair/Vice Chair):** Thank you for your comment. Your comment has been rejected for the following reason: “Fuel cells, and ground-source heat pumps” are not renewable depending on their fuel source. The Consensus Body accepts the insert of “the.”

MOTION: The Motion was made and seconded to reject the comment with the recommended reason.

Discussion took place on the Motion:

- There was a question raised about what is considered renewable (i.e. why fuel cells are being removed). It was clarified that fuel cells are a technology, not a fuel source.
- It was stated that the EU considers heat pumps as renewable energy. Net between energy moved and energy input could be considered.
- It was clarified that renewable sources providing short term renewable energy is considered energy efficiency, not renewable fuel source.

VOTE: The Motion carried with 15 in favor, 1 opposed, and 3 abstained.

Opposed: Mike Cudahy

Abstained: Kent Sovocool, Susan Gitlin, Rachel Minnery

17-4. Editorial. 8.3.4.3:

- **Comment: 8.3.4.3. Recommended Documentation** The findings as well as the name and contact information for the individual responsible for the energy modeling shall be ~~is~~ provided for points to be awarded.
- **Reason:** This appears to be mandatory for the section points. That should be made clear.
- **Recommended Response (From Chair/Vice Chair):** Thank you for your comment. Your comment has been rejected for the following reason: These are recommended documentation and therefore not mandatory.
- **Note:** There were thoughts about revising this language for clarity but no revision have been proposed at this time.

MOTION: The Motion was made and seconded to reject the comment using the recommended response.

VOTE: The Motion carried with 18 in favor, none opposed, and none abstained.

Opposed: None.

Abstained: None.

8-26. General. 8.5.1.1 and 8.5.1.2 and 9.8.1.2:

- **Comment:** The *Metering* and *Sub-Metering* Sections had the Subsection numbering system removed though credit value assignments in the right column in some cases refers back to those

list items. The irrigation system features however preserve this numbering format. Should the numbering be restored to the earlier Sections for consistency?

- **Reason:** Consistency
- **Recommended Response (From Staff):** Thank you for your comment. Your comment has been rejected for the following reason: The sub-numbering was removed from 8.5.1.1 and 8.5.1.2 because it is unnecessary for the purposes of scoring a building project. Sub-numbering is only included where each of the bulleted items requires a different response under the points column such as in 9.8.1.2.

MOTION: The Motion was made and seconded to reject using the given response.

VOTE: The Motion carried with 18 in favor, none opposed, and none abstained.

Opposed: None.

Abstained: None.

22 – 41. Substantive. 8.6.1.1:

- **Comment:** The study considers an on-site renewable energy system that provides at least 2-5% of the total building annual energy cost.
- **Reason:** A larger percentage of the building's energy use should be analyzed for on-site renewable energy. Two percent doesn't encourage efficient building design.
- **Recommended Response (From Chair/Vice Chair):** 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.

Discussion took place on the Motion:

- Speaking against the motion, a point was raised whether 2% is adequate as it's already been determined to be a minimum threshold. Having higher than 2% threshold would make developers look at more than one facet of the building. A response was provided that 2% on a large building is a significant amount of energy. Concern was raised that if a study requires looking at 5%, it would require projects to think in a broader scope, even if it's not feasible. It was stated that these types of studies are put on institutional buildings, so 2% is still significant, but requiring 5% may not be economically feasible because of the types of buildings these are Conducted on.
- Speaking against the motion, a question was raised about what the overall objective of this criterion is. If it is to achieve zero energy, this should be a higher percentage. The Consensus Body was reminded that this first criterion is just to do the study, while the next criteria award points if the project teams accomplish further energy savings.

VOTE: The Motion failed with 8 in favor, 9 opposed, and 3 abstained.

Opposed: Tien Peng, Jeff Bradley, Greg Johnson, Jane Rodhe, Gary Keclik, Gord Shymko, Chris Dixon, Karen Joslin, Mike Cudahy

Abstained: Kent Sovocool, Allan Bilka, Susan Gitlin

MOTION: The Motion was made and seconded to reject the comment. 2% was intended as entry level and to accommodate high EUI (energy use index) buildings.

Discussion took place on the Motion:

- It was stated that the goal is to drive the EUI down.

AMENDMENT: The Amendment was made and seconded to strike the phrase "and to accommodate high EUI buildings."

There were no Objections to the Amendment.

VOTE: The Amended Motion carried with 14 in favor, 4 opposed, and 1 abstained.

Opposed: Don Horn, Josh Jacobs, Susan Gitlin, Rachel Minnery

Abstained: Allan Bilka

Aff. Bradley. 5.1:

- **Reason or Comment:** On-site renewable energy- The definition is inconsistent with the definitions of renewable energy used by the Federal Government and overly prescriptive. It is unclear why this standard should prevent a building site owner from producing biomass for use on site. Technologies are continually advancing and this language may prevent the use of algal biofuels, switchgrass, or other energy sources from being used.
- **Revision Requested:** Remove new text: “from recovered waste sources”
- **Recommended Response (From Chair/Vice Chair):** [PENDING]

It was stated that the Consensus Body needs to weigh in on this issue as this is much bigger than Energy Efficiency.

Discussion before the Motion:

- There was debate about whether biomass is considered renewable or not. It was stated that whether biomass is considered renewable or not could be debated, but that this position is a compromise which isn't ideal, but removing it entirely is not an option.
- The question was raised whether the Standard should deviate from the national standard for what is renewable.
- It was reiterated that the federal government and the UN, including the IPCC, consider biomass renewable energy.
- The sentiment was echoed that biofuels shouldn't be included at all, but this is a good compromise. It was stated that nothing prevents biomass from being used, but it won't be eligible to earn points.
- It was stated that the Consensus Body needs to remember that regardless, using renewables is offsetting non-renewable energy. This sentiment was echoed, stating that this doesn't create a barrier, but to require two different forms of renewable energy and only one gets credit, is a financial barrier.
- It was stated that burning forests and not replacing it is no better than burning fossil fuel. Concern was raised that this definition is too big with too many vulnerabilities.

MOTION: The motion was made and seconded to send back to Subcommittee to develop a more robust definition.

Discussion took place on the Motion:

- It was stated that there won't be any new conclusions from the Subcommittee in regard to this issue and the speaker was against the motion.
- It was clarified that non-renewable is not currently defined.
- It was stated that Renewable energy versus emissions impact is an ongoing and complicated issue. The Speaker was unsure if the Subcommittee or Consensus Body will be able to come up with a solution.
- It was stated that “on-site” should be better defined.
- The Motion Secunder stated that they don't want to send the comment back to the subcommittee after hearing the discussion.
- One member pointed out that the conversation has shifted from carbon use. The opinion was voiced that this comment doesn't need to be sent back to the Subcommittee and that the Consensus Body should vote this motion down and propose a new motion.

VOTE: The Motion failed with 7 in favor, 9 opposed, and 2 abstained.

Opposed: Don Horn, David Eldridge, Tien Peng, Greg Johnson, Jeff Bradley, Jane Rohde, Allan Bilka, Mike Cudahy, Karen Joslin

Abstained: Josh Jacobs, Paul Bertram

MOTION: The Motion was made and seconded to reject the comment. This is a compromise position based on extensive Subcommittee discussion.

Discussion took place on the Motion:

- It was stated that removing that comment and not adding any additional language about biofuels being produced in a sustainable manner is not appropriate. The speaker was in favor of the motion.
- It was clarified that the Consensus Body needs to focus on more than one fuel source when looking at this issue.
- It was stated that the text should be removed to allow technology developments to continue. The speaker was against the motion

VOTE: The Motion carried with 10 in favor, 5 opposed, and 3 abstained.

Opposed: David Eldridge, Greg Johnson, Jane Rohde, Jeff Bradley, Karen Joslin

Abstained: Gord Shymko, Chris Dixon, Gregg Bergmiller

---Day One of Meeting #31 ended at 7:04PM CT---

Thursday, May 18, 2017

Welcome & Roll Call

Secretariat, Maria Woodbury welcomed participants and conducted roll call to establish quorum. The anti-trust statement and code of conduct were reviewed and participants were requested to comply with both fully.

Woodbury reminded members that all are welcome to participate in the discussion provided participants raise their hands. Hands will be called on in order. Participants in the room were reminded to state their name before speaking so remote participants can keep track of discussions.

On the second day of this meeting, no members voted using voting alternates and 4 members voted using a proxy for the duration of the day (Karen Joslin for Paul Bertram, Gord Shymko for Chris Dixon, Jeff Bradley for Jane Rohde, Bill Freeman for George Thompson), and 2 members voted using a proxy for part of the day (Don Horn for Susan Gitlin, Tien Peng for Rachel Minnery).

Administrative Items

Chair Mike Lehman made his opening comments thanking everyone for their time, expertise. Lehman reviewed the day's agenda.

Second Public Comment Period

Project Management: Presented by Subcommittee Chair Karen Joslin

Dixon. 6.1.3:

Reason or Comment: • This section is too vague to be anything of value. There is no way to gauge whether or not any assessment made is relevant or meaningful, no Standard to judge anything developed in pursuit of the points available in this section. • No definition is provided for terms "extreme natural events" or "global climate change." • There is no way to definitively assess "hazards" or "probability and severity" of a "global warming" "event." • Hazards listed are contradictory to Section 7.1.2 which provides points for NOT building in a flood zone, and also contradictory to the spirit of Section 7.1.2 which rewards projects that are NOT located in areas that would be subject to many of the "hazards" listed in this section.

Revision Requested: Delete this section in its entirety.

Recommended Response (From Task Group): Thank you for your comment. Your comment has been rejected for the following reason: The Consensus Body has reviewed your comment and requests that a more specific recommendation be submitted in the next review cycle.

Task Group Vote: 4 in favor, 3 opposed, none abstained

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

Discussion took place on the Motion:

- A question was raised about whether the commenter will be able to respond in the next comment period.

VOTE: The Motion carried with 22 in favor, 1 opposed, none abstained

Opposed: Chris Dixon

Abstained: None

18 – 2. Editorial. 6.1.3:

Comment: Revise the terminology so as not to conflict with the risk assessment referred to in Section 10.3 or develop a separate definition that only applies to the use of the term in 6.1.3

Reason: The intention of risk assessment in this section is very different from that how it is defined in Section 5.1 and how it is intended in 10.3.

Recommended Response (From Task Group): Thank you for your comment. Your comment has been accepted and the changes have been implemented in the draft Standard. The Consensus Body has changed the title of the criterion to Building Risk Assessment. The definitions have been separated and the definition of risk assessment in the context of this section is provided by 6.1.3.1.

Task Group Vote: 8 in favor, none opposed, 1 abstained.

MOTION: The Motion was made and seconded to approve the recommended response.

VOTE: The Motion carried with 23 in favor, none opposed, none abstained

Opposed: None.

Abstained: None.

Minnery. 6.1.3:

Reason or Comment: Title clarification

Revision Requested: Replace title with: “Enhancing Resilience to Hazards”

Recommended Response (From Task Group): Thank you for your comment. Your comment has been rejected for the following reason: The title will be changed to “Building and Site Resilience in place of Planning for Resilience.”

Task Group Vote: all in favor

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

VOTE: The Motion carried with 21 in favor, 1 opposed, and none abstained

Opposed: Rachel Minnery

Abstained: None.

Minnery. 6.1.3.1:

Reason or Comment: “Risk assessment” is a term that can be confused with several applications, including text within the document. This section needs to be rewritten for clarity. See comment above.

Revision Requested: Change title to: “Hazard vulnerability assessment”

Recommended Response (From Task Group): Thank you for your comment. Your comment has been rejected for the following reason: The Consensus Body has changed the title of the criterion to “Building Risk Assessment”. The definitions have been separated and the definition of risk assessment in the context of this section is provided by 6.1.3.1.

Task Group Vote: 6 in favor, 1 opposed, 2 abstained.

MOTION: The Motion was made and seconded to approve the recommended response.

VOTE: The Motion carried with 22 in favor, none opposed, and 1 abstained

Opposed: None.

Abstained: Rachel Minnery

Minnery. 6.1.3.2:

Reason or Comment: “Building Function Assessment” is an unusual term. Description should be clarified and could mention: Determine an acceptable timeframe for the building to be out of service. Determine which building components and spaces need to be operational during or immediately after a disaster. Develop and integrate performance goals.

Revision Requested: Revise title to: “continuity of operations following a hazardous event”

Recommended Response (From Task Group): Thank you for your comment. Your comment has been Accepted with modification. The following changes have been implemented in the draft Standard: The criterion title has been changed to Building Operational Continuity or Recovery Assessment and the text has been modified as: “various building functions”

Task Group Vote: 6 in favor, 1 opposed, 2 abstained.

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

VOTE: The Motion carried with 22 in favor, none opposed, and 1 abstained

Opposed: None.

Abstained: Rachel Minnery

22 – 6. Substantive. 6.1.3:

Comment: 6.1.3.2 ~~Building Function Assessment~~ Planning for Continuity 6.1.3.3 Document that the findings of both the risk and ~~building function~~ Planning for Continuity assessments have been integrated into the building design parameters . . . Title revision - Planning for Continuity – Business/Mission

Reason: What is the time scale that this assessment is intended to address- acute or chronic climate change? Without a definition for resilience, how does the protocol user know how to effectively and efficiently characterize resilience? Is the protocol user focused on relevant assets which are important to continuity, historic or cultural asset, with an intended long service life ? Is the protocol user discerning/defining which primary climate risks are of concern regarding the duration, intensity and frequency to inform the intent of developing resilience?

Recommended Response (From Task Group): Thank you for your comment. Your comment has been rejected for the following reason: This has been addressed in response to another comment and is already dealt with in the text.

Task Group Vote: 5 in favor, none opposed, 2 abstained

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

VOTE: The Motion carried with 21 in favor, 2 opposed, and none abstained

Opposed: Don Horn, Susan Gitlin

Abstained: None.

22 – 16. Substantive. 12:

Comment: [The National Climate Assessment is not listed as a resource or reference. What documents does the owner or design team use to inform their decisions regarding incremental climate change. Other document should also be provided for reference from the National Academies and the Climate Resilience Toolkit/Climate Explorer - <https://toolkit.climate.gov/> NOAA Digital Coast <https://coast.noaa.gov/digitalcoast/> as well as the NOAA NESDIS 142 Series- Regional Climate Trends and Scenarios for the U.S. National Climate Assessment](#)

Reason: For use in the Planning for Resilience section.

Recommended Response (From Task Group): Thank you for your comment. Your comment has been accepted as modified. An informational reference(s) section will be created for 6.1.3 and these references will be included in that section.

Task Group Vote: 8 in favor, none opposed, none abstained.

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

VOTE: The Motion carried with 23 in favor, none opposed, and none abstained

Opposed: None.

Abstained: None.

22 – 8. Substantive. 6.1.3:

Comment: Points for the assessment seem to be very low for the level of effort that is needed particularly if the protocol user is not a long term asset holder.

Reason: Clarify that likely the owner is the best team to address the acute aspects of this perhaps even the chronic climate related risks as well.

Recommended Response (From Task Group): Table until further action from the point task group. [The reformulated point task group recommended that no changes will be made to the overall point allocation between assessment areas.]

Task Group Vote: 8 in favor, none opposed, none abstained.

Discussion took place before the Motion:

- It was stated that the response should be “we will look at the point allocation based on the overall point allocation in Project Management.”
- There was general agreement that this comment cannot be responded to until points have been looked at. It was decided this comment would be tabled.

22 – 26. Substantive. 6.2.1.1.3:

Comment: Define risk assessment and risk.

Reason: The definitions in Section 5 only relate to products. The use of the terms here is entirely different.

Recommended Response: Accept with modification. The text was modified for clarity as follows “An ~~project risk assessment~~ assessment is conducted prior to the start of construction to identify major ~~risks risks~~ that”

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

VOTE: The motion carried with 22 in favor, none opposed, and 1 abstained

Opposed: None.

Abstained: Susan Gitlin

22 – 28. Substantive. 6.3.1.1:

Comment: The LCCA study period is not less than ~~that referenced in ASHRAE Standard 189.1 2014, Table 10.3.2.3~~ the expected life of the building or system.

Reason: The referenced table is for minimum building service life and is not appropriate for LCCA.

Recommended Response: Accept with Modification. We are specifying 10 years for a temporary building and 100 years for a permanent building to provide a clear and consistent benchmark.

Discussion took place before the motion:

- It was stated these are higher values than ASHRAE. The speaker is in favor of the motion.
- Speaking against the motion, it was stated that there should be more options for the project team for the number of years appropriate for them. The timeframe will be dependent on their needs.
- It was clarified that a benchmark is required to prevent builders from gaming the system.
- There was debate around the length of time for a temporary building versus a permanent building.

MOTION: The Motion was made and seconded to reject the comment with the reason that it is appropriate to tie back to 189.1.

Discussion took place on the Motion:

- The question was raised if it's appropriate to write 189.1 into the Standard rather than pulling specific numbers out of it. Concern was raised that standards are changing so rapidly. The speaker was against the Motion.
- It was stated that modeling is include for best predictions.

MOTION TO WITHDRAW: The Motion was made and seconded to withdrawn the Motion.

There were no Objections to Withdrawing the Motion.

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

Discussion took place on the Motion:

- Concern was raised that the language doesn't specify what option to do, just to report it. It was clarified that the reason for this is the short term vs. long term effects and consequences of green products.

- It was stated that builders shouldn't be able to game the system by choosing whatever timeframe they wanted. It was clarified that the ASHRAE table is the minimum for the Standard.

VOTE: The Motion carried with 11 in favor, 10 opposed, and 3 abstained

Opposed: Tien Peng, Gary Keclik, Karen Joslin, Paul Bertram, Mike Cudahy, Thomas Pape, Bill Freeman, John Cross, George Thompson, Rachel Minnery

Abstained: Kent Sovocool, Allan Bilka, Josh Jacobs.

Water Efficiency:

Presented by Subcommittee Chair Kent Sovocool

(Note: Due to one Consensus Body Member's limited availability, the Agenda was altered)

18 – 4. General. 9.1.4:

Comment: Clarify how points are awarded

Reason: [Left blank by commenter]

18 – 5. General. 9.1.4:

Comment: Delete 75-point deduction

Reason: [Left blank by commenter]

Recommended Response (Subcommittee): Thank you for your comment. Your comment has been rejected for the following reason: The committee prefers to incentivize achieving the credit by implementing a penalty system.

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

Discussion took place on the Motion:

- It was explained that there was a lot of discussion and compromise on the current point situation. It was stated that the Subcommittee believes prerequisites or negative points are required in order to ensure project teams include WaterSense TM products.
- It was stated that this is not equivalent to other industry standards and this is critical for the Standard. It was stated that if there is no prerequisite, then there needs to be penalties.
- It was stated that this system works for now and the comment should be rejected.
- There was discussion about whether the amount of points is appropriate. It was stated that it isn't expensive for project teams to comply. It might be possible to find points in other areas of the Standard. It was stated that Efficiency Measures need to be addressed.
- It was stated that it is not adequate to suggest sending this back to the Subcommittee. The Subcommittee has properly recommended responses to public comments.
- Discussion took place regarding increasing the minimum percentage from 20% to 30%. The only way for that to work is if the Water subcommittee had 75% of the points.

- Concern was raised that there are five paths (the fifth being taking the point penalty) and that the fifth path isn't displayed clearly.
- The Consensus Body was reminded that Green Globes was always intended to cover buildings that fall in "fat part of the bell curve". Concern was raised whether the Standard is too easy or if it's attempting to be an industry equivalent. Staff warned participants that the conversation was in danger of violating the Anti-Trust Policy.

VOTE: The Motion carried with 14 in favor, 3 opposed, and 7 abstained

Opposed: Gord Shymko, David Eldridge, Chris Dixon

Abstained: Greg Johnson, Jeff, Bradley, Jane Rodhe, Allan Bilka, Charles Kibert, Gregg Bergmiller, William Carroll

8 – 10. General. 5.1:

Comment: There is a definition for **reclaimed water** as well as one for **recycled water**, despite the latter simply being a pointer to the prior. In the case of the definition for **recovered material**, the phrase **[reclaimed]** is proposed as clarifying language. Would it be better to provide two definitions with one pointing to the other as per the other example?

Reason: For consistency, the Standard benefits from utilizing similar formats for representing similar information.

Recommended Response (Subcommittee): Thank you for your comment. Your comment has been accepted and the changes have been implemented in the draft Standard. The language will read "reclaimed [recycled] water and the referential definition of recycled water shall be struck from the language.

MOTION: The Motion was made and seconded to move the Subcommittee's response.

Discussion took place on the Motion:

- It was stated that the state of California doesn't call this recycled water. It was clarified that this definition is all-encompassing.

VOTE: The Motion carried with 22 in favor, none opposed, and 1 abstained

Opposed: None.

Abstained: Karen Joslin

Sovocool. 9.1:

Reason or Comment: Reconstruct to eliminate the redundancy.

Revisions Requested: Substantive. There is redundancy in that the four paths and explanation appear twice.

Recommended Response (Subcommittee): 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 subcommittee's recommendation.

Discussion took place on the Motion:

- It was clarified that the bullets should be put after the text.
- A participant observed that there in fact five paths. There was discussion around whether the penalty option is in fact considered a path.
- Staff suggested that the “no path” language could be a 5th bullet with an “or”

AMENDMENT: The Amendment was made and seconded to add “in addition” to the sentence “if no path is achieved...” will be moved above to the header language following “four paths are provided... Plumbing”

There were no Objections to the Amendment.

Discussion took place on the Amendment:

- It was clarified that this is only if project teams don’t achieve a path.

VOTE: The Amended Motion carried with 22 in favor, none opposed, and 1 abstained

Opposed: None.

Abstained: Allan Bilka

8 – 23. General. 9.1.4:

Comment: The credit value assignments for the new pathway are very difficult to follow. The Standard jumps from +1 point to +4 points to +45 points to -75 points.

Reason: As presented this material is very confusing and the logic behind it is not clear. Consider revising.

Recommended Response (Subcommittee): Thank you for your comment. Your comment has been rejected for the following reason: The committee feels that at least 98% fixtures should be able to make the requirements. If all you do is 80% you void the penalty.

MOTION: The Motion was made and seconded to move the response based on prior Consensus Body Action.

VOTE: The Motion carried with 21 in favor, none opposed, and 3 abstained

Opposed: None.

Abstained: Gregg Bergmiller, Paul Bertram, Gary Keclik

Joslin. 9.1:

Reason or Comment: “If no path is chosen, 75 points are deducted from total earned points in the Water Efficiency Assessment Area.” Deducting points from successful compliance in other Sections is an oddly punitive measure that I believe will cause great confusion when users attempt to implement Green Globes.

Revision Requested: At a minimum, this language must clearly limit the deduction to only as many points as have been “earned” in Assessment Area 9 Water Efficiency. In other words there should not be a negative subtotal that would carry over to negating points in other Areas.

Recommended Response (Subcommittee): Thank you for your comment. Your comment has been accepted with modification by altering the language to clarify that the deduction affects only the Water Assessment Area. We’ve clarified that Path A, B, and C are N/A where no fixtures or fittings exist.

MOTION: The Motion was made and seconded to accept the Subcommittee’s response.

Discussion took place on the Motion:

- There was a question whether 75 points is too much of a penalty. It was clarified that the points were derived by looking at what a typical home has. It was stated that if a project team does the minimum in the Water Assessment Area, the project would earn 38 points. It was stated that projects only need 80% of the fixtures to comply to avoid the penalty. It was stated that it is possible to earn 20% minimum for certification and take the penalty.

VOTE: The Motion carried with 23 in favor, none opposed, and 2 abstained

Opposed: None.

Abstained: Gregg Bergmiller, Nicole Dovel-Moore

Dixon. 9.1:

Reason or Comment: Remove the following: o Seventy-five points are deducted if less than 80% of each fixture and fitting type meets credit requirements as listed in Path D, • There is no occurrence in any other portion of Green Globes the penalizes project teams like this. Green Globes is achievement-based and designed to reward project teams for more environmentally friendly design. This penalization is inconsistent with, and contradictory to, the rest of the rating system. • There is no rationalization provided in the language to justify this penalty. It applies only to Major Renovations, for no apparent / stated reason • Point value is nearly twice the available points for this section, again, with no reason/rationalization as to why.

Revision Requested: Remove the negative points penalty.

Recommended Response (Subcommittee): Thank you for your comment. Your comment has been rejected for the following reason: The committee prefers to incentivize achieving the credit by implementing a penalty system. For clarification, the penalty applies to all paths if no path is achieved, not just renovations.

MOTION: The Motion was made and seconded to move the recommended Subcommittee action based on prior action taken by the Consensus Body.

VOTE: The Motion carried with 22 in favor, 2 opposed, and none abstained

Opposed: Gord Shynko, Chris Dixon

Abstained: None.

Bradley. 9.1:

Reason or Comment: Green Globes should not rely on 189.1 As a pathway as currently referenced in the standard.

Revision Requested: [Left Blank by Commenter]

Recommended Response (Subcommittee): Thank you for your comment. Your comment was rejected for the following reason: Other options are available in addition to 189.1 and the commenter provided no persuasive reason for eliminating 189.1.

MOTION: The Motion was made and seconded to accept the Subcommittee's response to reject.

Discussion took place on the Motion:

- The commenter stated that unique language should be developed rather than rely on 189.1.

VOTE: The Motion carried with 18 in favor, 2 opposed, and 2 abstained

Opposed: Jeff Bradley, Gregg Bergmiller

Abstained: Karen Joslin, Jane Rodhe

Dixon. 9.4.3:

Reason or Comment: Single-load and Multi-load are not defined.

Revision Requested: Define terms.

Recommended Response (Subcommittee): Thank you for your comment. Your comment has been accepted with modification. Single load and multi load are already defined as a subset of the definition for clothes washers. The following will be inserted alphabetically under 5.1 definitions "single load: see clothes washers. Multi-load: see clothes washers." to refer users to the appropriate definition. The language in 9.4.3.1 will be changed to "*clothes washers, single load*" and "*clothes washers, multi load.*" In addition, 9.4.3.2 language will be modified to "*clothes washer, tunnel clothes washers*"

Subcommittee Vote: all in favor.

MOTION: The Motion was made and seconded to accept the Subcommittee's recommendation to accept with modification.

VOTE: The Motion carried with 24 in favor, none opposed, and none abstained

Opposed: None.

Abstained: None.

14 – 13. Substantive. 9.6.4:

Comment: Designer's drawings, specifications, and performance documentation including estimated yield and calculations to demonstrate the percentage of water from non-potable sources and alternate sources of water;

Reason: Because this section provides the option to use both non-potable and alternate water source, documentation provided should calculate percentage obtained from both.

Recommended Response (From Subcommittee): 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 Subcommittee's recommended response.

VOTE: The Motion carried with 21 in favor, none opposed, and none abstained

Opposed: None.

Abstained: None.

8 – 27. Substantive. 9.8.1.2:

Comment: According to the credit value assignments in the right column, "one point is earned for *each* of the listed features included in the irrigation system up to a maximum of 11 points." the features identified are number 1 through 7. How can someone obtain the remaining 4 credits?

Reason: There appears to be a mathematical error or four features are missing from the list.

Recommended Response (From Subcommittee): Thank you for your comment. Your comment has been accepted with modification. The language has been broken up into different subsections with points ascribed accordingly to eliminate confusion.

Subcommittee Vote: 5 in favor, none opposed, 1 abstained.

MOTION: The Motion was made and seconded to accept the Subcommittee's recommendation.

Discussion took place on the Motion:

- It was clarified that in the strikethrough draft, this is in fact 9.8.1.3.

VOTE: The Motion carried with 24 in favor, none opposed, and none abstained

Opposed: None.

Abstained: None.

22 – 42. Substantive. 9:

Comment: ANSI/ASHRAE/USGBC/IES Standard 189.1-2014

Reason: Use full name of standard throughout similar to Section 8.

Recommended Response (From Subcommittee): Thank you for your comment. Your comment has been accepted and the changes have been implemented in the draft Standard. The reference will be updated throughout the Standard where it appears for consistency.

Subcommittee Vote: all in favor.

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

Discussion took place on the Motion:

- The question was raised whether the Consensus Body had already decided to use the official title in the reference section, but use shorthand elsewhere. The question was raised if this is an editorial decision for staff.

VOTE: The Motion carried with 12 in favor, 7 opposed, and 5 abstained

Opposed: Greg Johnson, Gary Keclik, Kent Sovocool, Charles Kibert, Allan Bilka, Mike Cudahy, Thomas Pape

Abstained: John Cross, Gord Shymko, Chris Dixon, Gregg Bergmiller, David Eldridge

Project Management:

Presented by subcommittee Chair, Karen Joslin

Aff. Bradley. 6.3.1 & 6.3.2:

Reason or Comment: Green Globes should not rely on 189.1 for the LCCA study period that is referenced in the standard. In this case it would be better for Green Globes to rely upon the design team to determine the service life.

Revision Requested: Remove new text: "The Service Life is not less than that referenced in ASHRAE Standard 189.1-2014, Table 10.3.2.3"

Recommended Response: Gregg moves. Accept with Modification. We are specifying 10 years for a temporary building and 100 years for a permanent building to provide a clear and consistent benchmark. Karen 2nd.

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

Discussion took place on the Motion:

- The question was raised whether the Consensus Body had already voted on this issue. It was clarified that this is the same response used in the previous ASHRAE comment. It was stated that one was related to Life Cycle and that this comment is in regards to Service Life. It was clarified that these are two different topics.

VOTE: The Motion failed with 10 in favor, 13 opposed, and 1 abstained

Opposed: Susan Gitlin, Bill Freeman, George Thompson, Greg Johnson, Don Horn, Jeff Bradley, Jane Rodhe, Gary Keclik, Gord Shymko, Chris Dixon, Charles Kibert, Allan Bilka, Mike Cudahy

Abstained: Kent Sovocool

MOTION: The Motion was made and seconded to respond separately to the two sections and to only address 6.3.2.

Discussion took place on the Motion:

- It was stated that these comments refer to how to appropriately determine the service life. The question was raised why ASHRAE can't be referenced.

AMENDMENT: The Amendment was made to reject the comment in response to 6.3.2 and keep the current text. 6.3.1 would still maintain decision on previous motion.

Point of Order: There was discussion around whether the Amendment is appropriate to the Motion on the table. The Parliamentarian clarified that this is a question of the mover's intention rather than a question of Parliamentary procedure.

The Amendment was not Seconded.

RESET: The Discussion was reset with all Amendments and Motions taken off the floor.

MOTION: The Motion was made and seconded to accept the Bradley comment as applicable to 6.3.2, clarifying that the motion would delete the entire sentence: "The Service Life is not less than that referenced in ASHRAE Standard 189.1-2014..."

Discussion took place on the Motion:

- Concern was raised that this is the most unclear option of all.

AMENDMENT: The Amendment was made and seconded to modify the language so that it reflects the language decided on in 6.3.1: "The Service Life is not less than the expected life of the building or system."

There were Objections to the Amendment.

Discussion took place on the Amendment:

- Concern was raised that this language is unclear whether language is being deleted or modified.
- It was clarified that this is a replacement as opposed to an amendment, regardless of the title it's given.
- It was stated that there's no big difference between the broad parameters of the two definitions.

VOTE: The Amendment failed with 3 in favor, 16 opposed, and 3 abstained

Opposed: Tien Peng, Rachel Minnery, Greg Johnson, Jeff Bradley, Jane Rodhe, Gary Keclik, Gord Shymko, Chris Dixon, Charles Kibert, Karen Joslin, Allan Bilka, John Cross, Paul Bertram, William Carroll, Bill Freeman, George Thompson

Abstained: Mike Cudahy, Kent Sovocool, Susan Gitlin

Discussion took place on the Motion:

- It was stated that the Service Life levels don't need to be specified by the Standard. It was stated that Green Buildings don't necessarily need extended use, they need to respond to intended

function. It was stated that this should be in the purview of the project teams. It was stated that this is subjective.

VOTE: The Motion carried with 17 in favor, 7 opposed, and 1 abstained.

Opposed: Don Horn, Tien Peng, Rachel Minnery, John Cross, Karen Joslin, Paul Bertram, Susan Gitlin

Abstained: Kent Sovocool.

22 – 29. Substantive. 6.4.1:

Comment: Revise 6.4.1.1 to read as follows:

6.4.1.1 A moisture control design analysis is performed on ~~above-grade portions of the building envelope AND on walls and ceilings adjacent to spaces of added moisture~~ in accordance with ASHRAE 160-2009 or a steady-state water vapor transmission analysis for the purpose of predicting, mitigating, or reducing moisture damage to the building envelope, materials, components, systems, and furnishings.

Reason: Standard 160 does not address calculations for moisture control within interior spaces only. The criteria reflect outdoor and indoor conditions. For a green building standard the analysis should not be limited to above grade assemblies.

Recommended Response (From Subcommittee): Thank you for your comment. Your comment has been accepted with modification. Changing the order of the requirements will clarify the intended meaning, placing a focus on the interior assemblies. This criterion is intended to reward consideration beyond standard code requirements for perimeter envelop moisture mitigation.

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

Discussion took place on the Motion:

- There was a question about whether moisture is defined.
- Concern was raised that the change changes the original intent.
- It was clarified that originally only “above grade” was assessed and that the intent of the edits was to allow the entire interior of the building to be assessed.
- It was stated that it’s still unclear how the assessor can evaluate this.

AMENDMENT: The Amendment was made and seconded to move “in accordance with ASHRAE 160-2009” to after “the building envelope.”

There were Objections to the Amendment.

Discussion took place on the Amendment:

- Concern was raised that perhaps this is redundant and unneeded.
- It was stated that the Moisture Control Design Criteria is not clear and needs more work from the Subcommittee or it should be entirely struck. Others echoed similar sentiment that the language was unclear and needed more work.

VOTE: The Amendment carried with 19 in favor, none opposed, and 3 abstained

Opposed: None.

Abstained: Don Horn, Charles Kibert, Susan Gitlin

Discussion took place on the Amended Motion:

- It was stated that the intent is understood but that this isn't great language. It was suggested that comments could be submitted to improve the language. It was stated that points are earned for analysis but there aren't separate points for it.

VOTE: The Amended Motion carried with 15 in favor, 2 opposed, 7 abstained

Opposed: Bill Freeman, George Thompson

Abstained: Don Horn, Charles Kibert, Chris Dixon, Gary Keclik, Gord Shymko, Susan Gitlin, Josh Jacobs

MOTION: The Motion was made and seconded to send the language back to the Subcommittee to reconcile the criteria in the points column with the criteria on the left.

Discussion took place on the Motion:

- It was proposed that the Subcommittee needs to specify when points are earned.
- Concern was raised that the Subcommittee has already exhausted its options. It was stated that if that's the case the section should be struck.
- It was stated that doing a study and earning no points is useless.
- The Consensus Body Chair invited anyone with ideas for specific language to submit proposals and reminded the Consensus body to focus on the Motion at hand.

VOTE: The Motion carried with 17 in favor, 1 opposed, and 4 abstained.

Opposed: John Cross

Abstained: Jeff Bradley, Jane Rodhe, Karen Joslin, Paul Bertram

22 – 30. Substantive. 6.5.1.1:

Comment: Add sub-bullets under the appropriate bullets in the right column: Not applicable if there are no irrigation systems. Not applicable if there are no elevating/conveying systems. Not applicable if there are no communications systems.

Reason: To distribute the commissioning points appropriately.

Recommended Response (From Task Group): Thank you for your comment. Your comment has been accepted and the changes have been implemented in the draft Standard. A sub-bullet was added in the right-hand column for each of these to match what is used under "other significant systems."

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

Discussion took place on the Motion:

- There was discussion on the meaning of non-applicable and the use of irrigation systems in the Standard. It was stated that without the non-applicable it would be an oversight.

VOTE: The Motion carried with 23 in favor, none opposed, and 1 abstained.

Opposed: None.

Abstained: Allan Bilka

Site:

Presented by Subcommittee Chair Gregg Bergmiller

Language Inconsistencies

~~low-sloped roof: a roofing assembly applied to a roof deck having a slope less than or equal to 3 in/ft. (7.6 cm/m) 7.6 cm/m (3 in/ft.).~~

Recommendation: Retain the deletion of the definition.

Vote: 8 in favor, none opposed, none abstained.

~~7.3.4.2 Paved Hardscape surfaces have a high SRI. A high SRI is an initial SRI of 29 or greater. New concrete without additional colored pigment is deemed to comply without additional testing.~~

Recommendation: Sustain the previous action.

Vote: 6 in favor, none opposed, 1 abstained.

~~Fourteen points are earned where both of the listed requirements are met appear in the stormwater management report.~~

~~Seven points are earned where one of the listed requirements are met appears in the stormwater management report.~~

~~7.5.1.1: The plan identifies existing soil types and the installed landscape maintains those types and incorporates appropriate soil preparation and drainage to support root development for vegetation planned for the site.~~

Recommendation: The struck language will remain stricken

Vote: 7 in favor, none opposed, none abstained

~~7.5.1.3.1: Minimum of 50% of~~ The vegetated area uses ~~non-invasive,~~ *drought tolerant plants* ~~that are native or adaptive; and/or~~

Recommendation: The struck language will remain stricken

Vote: 8 in favor, none opposed, none abstained.

MOTION: The Motion was made and seconded to accept the Subcommittee's recommendation.

Discussion took place on the Motion:

- It was stated that the points breakdown in original language is different than what is shown, but the overall message is the language is clearer and there is no overlap with percentages, and clarify over what action is considered valid.

VOTE: The motion carried with 21 in favor, none opposed, and none abstained.

Opposed: None.

Abstained: None.

22 – 34. Substantive. 7.2.1.1

Comment: A building entrance is within 0.25 mi (0.4 km) walking distance of a local transit stop or 0.5 mi (0.8 km) walking distance of a rapid transit stop.

AND

The stop is served by a transit route that offers service:

- with single direction intervals (headways) no longer than 15 minutes during peak hours and 30-minute single direction intervals (headways) during off-peak hours for a minimum of 14 hours each weekday; and
- with single direction intervals (headways) no longer than 1 hour and operating at minimum of 14 hours at least one day each weekend.

{Local transit includes public transit that uses the same right-of-way as automobiles AND for which the distance between stops averages less than 0.33 mi (0.5 km). Rapid transit is refers to all other types of public transit}.

Reason: Move the definitions for local and rapid transit after the requirements. Delete the parentheses around the definition.

Staff Notes: Send to Gregs. Propose moving to definitions? Clarify how this move would appear.

Recommended Response: Thank you for your comment. Your comment has been accepted with modification. In order to maintain stylistic consistency between sections, the parenthesis will be struck and “Note:” will be inserted before the language. This is Assessment Guidance for the application of the Standard, not a definition.

Subcommittee Vote: 9 in favor, none opposed, none abstained

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

Discussion took place on the Motion:

- Clarification was requested about what is included in rapid transit. Clarification was requested to describe differently rather than to specify further.

VOTE: The Motion carried with 20 in favor, none opposed, and 3 abstained.

Opposed: None.

Abstained: Don Horn, Mike Cudahy, Paul Bertram

REVOTE: The Motion still carried following a revote after clarifying the intent of the motion with 22 in favor, none opposed, and 2 abstained.

Opposed: None

Abstained: Paul Bertram, Doug Tucker

22 – 31. Substantive. 7.1.2.1

Comment: Right column: 12 points ~~or N/A~~

~~Not applicable where there are no brownfields, or remediated Superfund sites available.~~

Reason: N/A is not appropriate here. The large number of points is meant to encourage development on brownfields and should not be redistributed to other areas. Not building on a brownfield is a missed opportunity. Brownfields can have real or perceived contamination and are frequent urban problem sites so strong encouragement is needed for their reuse. The word “available” is confusing as it could be interpreted as available for purchase, which is not the intent.

Recommended Response (From Subcommittee): Thank you for your comment. Your comment has been accepted and the changes have been implemented in the draft Standard.

Subcommittee Vote: 8 in favor, none opposed, none abstained

MOTION: The Motion was made and seconded to accept the subcommittee’s recommended response.

Discussion took place on the Motion:

- It was stated that the N/A is appropriate, there are some parts of the country where brownfields are not readily available. Some types of buildings wouldn’t be on brownfields (e.g. hospitals, schools).
- It was clarified that Brownfield is defined in the Standard.
- The opinion was stated that there needs to be something in-between Brownfield and N/A.
- It was clarified that it needs to be clear projects get the 12 points if projects actually do build on a brownfield site, as opposed to avoid it.
- It was stated that the total points possible should change if there is no opportunity to build on a brownfield. It was stated that this model incentivizes and redefines what an “opportunity” is to build.

VOTE: The Motion carried with 14 in favor, 7 opposed, and 4 abstained.

Opposed: David Eldridge, Gary Keclik, Gord Shymko, Chris Dixon, Charles Kibert, Mike Cudahy, Thomas Pape

Abstained: Kent Sovocool, Jeff Bradley, Jane Rodhe, Greg Johnson

22 – 33. Substantive. 7.1.2.4

Comment: Left column:

7.1.2.4 No construction or site disturbance takes place in the 100-year floodplain.

Alternatively:

Buildings and additions in the floodplain are elevated 3 ft. (.9 m) above the 100-year floodplain or are built to allow water to flow through or under the lowest floor.

And

Buildings and structures assigned a risk category of III or IV in Table 1604.5 of the 2012 International Building Code will not be located within a 500-year floodplain.

Reason: Doesn't follow the format of the rest of the standard. Points and statements for non-applicability are incorrectly included in the left column. Move references to points to the right column.

The "alternatively" statement belongs to the first requirement, not the second or both.

Staff Notes: None

Recommended Response: Thank you for your comment. Your comment has been accepted and the changes have been implemented in the draft Standard.

Subcommittee Vote: 9 in favor, none opposed, none abstained

MOTION: The Motion was made and seconded to accept the Subcommittee recommendation.

Discussion took place on the Motion:

- The question was raised if "not required" is the same as "not applicable".
- It was stated that the 3rd and 4th bullets should be combined.

AMENDMENT: The Amendment was made and seconded to leave the "Not Applicable" bullet and "not required" bullet where they were in the previous criterion. Change the "Not required" to a "not applicable".

Discussion took place on the Amendment:

- It was stated that it needs to be clear how "not applicable" applies because there are two with two different meanings in the same table.
- Speaking against the amendment, it was stated that changing the "not required" to "not applicable" changes the meaning of the language. Another speaker agreed.
- The question was raised whether "not required" unintentionally encourages building in flood plains. It was clarified that there are cities built in flood plains, the intention is to prevent teams from constructing buildings in high-risk areas. It was clarified that the "not required" language only pertains to the last paragraph.
- It was suggested that a potential solution could be to number the different paragraph to separate for clarification.
- It was stated that this language should be sent back to the Subcommittee for further work.

VOTE: The Amendment failed with 1 in favor, 22 opposed, and none abstained.

Opposed: Don Horn, Tien Peng, David Eldridge, Greg Johnson, Jeff Bradley, Jane Rodhe, Gary Keclik, Gord Shymko, Chris Dixon, Kent Sovocool, Charles Kibert, John Cross, Allan Bilka, Mike Cudahy, Rachel Minnery, Douglas Tucker, Gregg Bergmiller, Susan Gitlin, Bill Freeman, George Thompson, Angela Tin, Paul Bertram

Abstained: None.

VOTE: The Motion failed with 1 in favor, 20 opposed, and 2 abstained.

Opposed: David Eldridge, Tien Peng, Greg Johnson, Gary Keclik, Kent Sovocool, Gord Shymko, Chris Dixon, Karen Joslin, Allan Bilka, Mike Cudahy, John Cross, Charles Kibert, Rachel Minnery, Douglas Tucker, Gregg Bergmiller, Susan Gitlin, Bill Freeman, George Thompson, Angela Tin, Paul Bertram

Abstained: Jeff Bradley, Jane Rodhe

MOTION: The Motion was made and seconded to refer back to the Subcommittee.

VOTE: The Motion carried with 20 in favor, 1 opposed, and 1 abstained.

Opposed: Karen Joslin

Abstained: Jeff Bradley

Aff. Bradley. 7.2.1.4:

Reason or Comment: It is unclear why a bike path is required to be connected to the building entrance in some fashion while the transit stop does not require this. The .25 mile requirement is confusing with this added requirement.

Revision Requested: Delete “AND A bicycle lane or multi-user path connects the public path or lane to the building entrance.”

Recommended Response (From Subcommittee): Thank you for your comment. Your comment has been accepted and the changes have been implemented in the draft Standard.

Subcommittee Vote: 4 in favor, 3 opposed, 1 abstained

MOTION: The Motion was made and seconded to accept the Subcommittee’s recommendation.

Discussion took place on the Motion:

- Speaking against the motion, the language is to ensure that people don’t have to ride over something dangerous in the last quarter mile to the building. Some places are built for car access but there’s no way to walk or bike safely to the building. Others agreed in principle.
- Concern was raised that this language requires too much of the project team. It was stated that cyclists shouldn’t need to ride up to the door. The last quarter mile should not be the focus on, rather bike lanes and infrastructure. The question was raised about the hypothetical situation where there is a bike path within a quarter mile but it’s separated from the building by an obstacle (such as a divided highway) within that quarter mile.

AMENDMENT: The Amendment was made and seconded to change the response to “Accept with modification. The original text will remain, but the last use of “the building entrance” will become “the building site.””

Discussion took place on the Amendment:

- An example was given stating that a bike rack across the street from an entrance wouldn’t count in this scenario. There was support for this point as well as a suggestion to reject the motion and send the comment back to the Subcommittee.
- It was stated that the phrase building entrance is used more than once in the language and it should be clear this amendment refers to the final use.
- It was stated that the language should say building “site” as opposed to “property”. This was an editorial change with no objections.

VOTE: The Amendment carried with 13 in favor, 8 opposed, and 3 abstained.

Opposed: Greg Johnson, Jeff Bradley, Jane Rodhe, Gord Shymko, Chris Dixon, Mike Cudahy, Susan Gitlin, Angela Tin

Abstained: John Cross, Douglas Tucker, Josh Jacobs

Discussion took place on the Amended Motion:

- It was stated that using the term “property entrance” enables the property to have enough flexibility to determine if the project is in compliance with the intent of the criteria.
- Concern was raised that this language doesn’t address the concern that lead to the Comment. The sentiment was restated that in large cities with strong bicycle infrastructure there is no incentive to build where bike lanes are around.

AMENDMENT: The Amendment was made and seconded to change the language to “there is reasonable unobstructed access between the bicycle lane or multi-user path and the property entrance”

There were Objections to the Amendment.

Discussion took place on the Amendment:

- Concern was raised that this approach might not ensure the bicycle gets to the building entrance or where bikes can be secured. Sites can be very large.

FRIENDLY AMENDMENT: The Friendly Amendment was suggested to change “... between the bicycle lane or multi user path and the secure bicycle storage or building entrance”

There were no Objections to the Friendly Amendment.

Discussion took place on the Amendment:

- It was clarified that “secured bicycle storage” is defined in the Standard.

FRIENDLY AMENDMENT: The Amendment was made and seconded to change “secure bicycle storage” to “bicycle parking facilities....”

There were no Objections to the Friendly Amendment.

VOTE: The Amendment carried with 24 in favor, none opposed, and none abstained.

Opposed: None.

Abstained: None.

VOTE: The Amended Motion carried with 24 in favor, none opposed, and none abstained.

Opposed: None.

Abstained: None.

17 – 2. Substantive. 7.2.1.5

Comment: 7.2.1.5 A bicycle parking rack is located within 50 ft. (15.24 m) of a main entrance, and is either readily visible from a main entrance, or signage indicating the location is posted at main entrances.

Reason: I think in some cases, the location may not be readily visible from a main entrance, by intentional design or not, and signage could be an option. This could help allow for racks covered by a roof or shelter, to protect the equipment during inclement weather.

Recommended Response (From): Thank you for your comment. Your comment has been accepted with modification. The proposed changes will be incorporated in the draft Standard. In addition, the comma following “entrance” will be removed for clarification.

Subcommittee Vote: 8 in favor, none opposed, none abstained.

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

Discussion took place on the Motion:

- Concern was raised that this language is restrictive. It was stated that on a university campus, there may be more than 50 feet between a bike rack and building entrance. The speaker felt there should be enough leeway for the developer and builder to build best for the site.
- It was stated that the distance could be increased to 150 feet.
- One speaker stated from personal experience that indoor bike parking is only available to the regular building users and not visitors. The speaker felt an amendment would be needed.
- It was stated that parts are stolen just as often as bicycles. The speaker was concerned that 150 feet may be too far away from the building and any security present.
- It was stated that there is no need to decipher length. The commenter doesn’t ask for this. It was clarified that there are already short and long term parking options in the Standard. The speaker suggested that at the most, signage would be needed.
- There was a question raised about whether the distance should be measured from a “main entrance” or “common entrance” or just “entrance”.

AMENDMENT: The Amendment was made and seconded to strike “main” from the first instance of “main entrance”.

Objections were raised to the Amendment.

AMENDMENT TO THE AMENDMENT: The amendment was made and seconded to change “main entrance” to “main or public entrance”.

There were Objections to the Amendment to the Amendment.

Discussion took place on the Amendment to the Amendment:

- It was stated that this should be “entrance” to cover both private and public buildings. It was clarified that the entrance could be loading docks, private entrances etc. It needs to be the entrance everyone uses. Concern was raised that “main or public entrance” might not be applicable to multi-family units. It was stated that the language should be as simple as possible.
- It was stated that building developers need to be trusted to do this properly and that the Consensus Body should avoid getting caught up on the language. Concern was raised that too much work has been invested into the Standard to assume things will be done correctly.

The Amendment to the Amendment was WITHDRAWN with no objection.

MOTION: The motion was made to CALL THE QUESTION.

VOTE: The motion to call the question on the amendment carried with 19 in favor, none opposed, and none abstained.

Opposed: None.

Abstained: None.

VOTE: The Amendment carried with 15 in favor, 2 opposed, and 2 abstained.

Opposed: Don Horn, Karen Joslin

Abstained: Allan Bilka, David Eldridge

MOTION: The motion was made to CALL THE MAIN QUESTION.

VOTE: The motion to call the amended motion carried with 22 in favor, none opposed, and 1 abstained.

Opposed: None.

Abstained: Greg Johnson

VOTE: The Amended Motion carried with 20 in favor, none opposed, and 1 abstained.

Opposed: None.

Abstained: Karen Joslin

Discussion took place after the Vote:

- It was stated that not all projects fit into simple boxes and that Assessors can determine whether the intention is carried out and the points are earned.

13 – 6. Substantive. 7.2.1.6.2

Comment: 7.2.1.6.2: provided for at least 50% of units in a multi-family residential building; Points: Two points where the bicycle parking is sheltered and secure. (Only applicable where the above two points are achieved and for 7.2.1.6.2.)

Reason: It is not clear how many points are awarded for 7.2.1.6.2. This is confusing.

Recommended Response (From): Thank you for your comment. Your comment has been accepted with modification. The numbering will be removed from 7.2.1.6.2 to clarify that this is an either/or criterion. The numbering for 7.2.1.6.1 will be placed in front of “sheltered bicycle parking” and the either/or criteria will be placed as sub-bullets. In addition, the language in the points column was changed to place “sheltered” in front of “bicycle parking facilities.”

Subcommittee Vote: 8 in favor, none opposed, none abstained.

MOTION: The Motion was made and seconded to accept the Subcommittee’s recommendation.

VOTE: The Motion carried with 25 in favor, none opposed, and none abstained.

Opposed: None.

Abstained: None.

14 – 7. Substantive. 7.2.1.7

Comment: ASTM ~~E2843-15~~ E2843-16a, Standard Specification for Demonstrating That a Building is in Walkable Proximity to Neighborhood Assets

Reason: ASTM E2843 has been revised. The most recent version is E2843-16a.

Staff Notes: Send to Gregs. Probably accept

Recommended Response: Thank you for your comment. Your comment has been accepted and the changes have been implemented in the draft Standard.

Subcommittee Vote: 9 in favor, none opposed, none abstained

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

VOTE: The Motion carried with 25 in favor, none opposed, and none abstained.

Opposed: None.

Abstained: None.

22 – 36. Substantive. 7.3.4.1:

Comment: . . . Where used to comply, shading trees may be existing plants that are retained on site or newly planted trees that will provide shade within 15-10 years.

Reason: Change tree shade requirement from 15 to 10 years to be consistent with section 7.3.4.2. 15 years is too long to provide the needed shade. Increasing drought may keep trees from reaching historic growth rates.

Recommended Response: (From Subcommittee): Thank you for your comment. Your comment has been accepted with modification. The Consensus Body will make the editorial change from “with” to “within”, but will not change from 15 years to 10 years. The 10 years encourages fast-growth trees that may be invasive and no give proper long-term shading and sustainable planting. 15 years provides more flexibility for a variety of eco regions where tree growth may be slower.

Subcommittee Vote: 9 in favor, 1 opposed, none abstained.

Note: A previous motion to accept the comment failed with 1 in favor, 9 opposed, and none abstained.

MOTION: The Motion was made and seconded to accept the Subcommittee’s recommendation.

Discussion took place on the Motion:

- It was clarified that the only thing changing is “with” to “within”. The question was raised if the language should be “shading trees or existing plants”. It was stated that the previous question will be addressed by the next comment in queue.
- It was stated that this was already addressed in the first draft so it should be rejected.

VOTE: The Motion carried with 23 in favor, 1 opposed, and 1 abstained.

Opposed: Don Horn

Abstained: Susan Gitlin

2 – 1. Substantive. 7.3.4.1:

Comment: 7.3.4.1 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. A high SRI is as follows: Where used to comply, shading trees may be existing plants that are retained on site or newly planted trees that will provide shade within 15 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: There is no objective, standardized way to quantify shading from trees on a roof. Rooftop shading from adjacent trees only occurs when the sun is lower to the horizon and has less impact on the roof's surface temperature, and by extension such shading provides minimal Heat Island Mitigation (the purpose of the credit) benefit. During the peak hours of solar energy throughout the middle of the day, shading will have no impact on the roof's surface temperature and by extension shading provides NO Heat Island Mitigation (the purpose of the credit) benefit during those critical hours. Although there have been numerous scientific studies demonstrating and quantifying the Heat Island Mitigation (and energy savings) benefits of cool (high SRI) and vegetated roofs, no such data exists to support "shading" of rooftops by adjacent trees as a quantifiable Heat Island Mitigation approach. Providing credit for something that "...will provide shade with(in?) 15 years" makes a mockery of the credit. It is no different than providing the credits if the "owner intends to install a cool (or vegetated) roof when they reroof the building" ...neither approach is consistent with the primary Purpose of the Assessment to use best practices to provide high performance buildings.

Recommended Response: (From): Thank you for your comment. Your comment has been rejected for the following reason: If a project team pursuing the criterion cannot show the rooftop shading plan, then they cannot gain points for it. Using this criterion will allow for those situations where rooftop shading by trees is possible.

Subcommittee Vote: 9 in favor, none opposed, 1 abstained

Note: A previous motion to accept the comment failed with 2 in favor, 8 opposed, and none abstained.

MOTION: The Motion was made and seconded to accept the Subcommittee's recommendation.

VOTE: The Motion carried with 25 in favor, none opposed, and none abstained.

Opposed: None.

Abstained: None.

22 – 37. Substantive. 7.3.4.1:

Comment: ~~BSR/GBI-01 201X, 6.4.1, Moisture Control Analysis~~

Reason: This reference does not provide any useful support to this section. If a moisture control analysis is required for 7.3.4.1 then that must be stated.

Recommended Response: (From): Thank you for your comment. Your comment has been accepted and the changes have been implemented in the draft Standard.

Subcommittee Vote: 10 in favor, none opposed, none abstained

MOTION: The Motion was made and seconded to accept the Subcommittee's recommendation.

VOTE: The Motion carried with 25 in favor, none opposed, and none abstained.

Opposed: None.

Abstained: None.

17 – 3. Editorial. 7.3.4.2:

Comment: 7.3.4.2 Where the hardscape surfaces are not shaded by the primary building structure Paved hardscape surfaces outside the building footprint ~~will~~ shall be intended to be shaded by trees or other vegetation within 10 years. In addition, the point in time of the shading measurement will be designated as 12 noon Standard Time on the Summer Solstice and ~~will~~ shall be documented in the shading plan. OR

At least 50% of installed hardscape area (walkways, patios, driveways, etc.) shall use permeable materials. Permeable materials shall be permitted to ~~that can~~ include one or more of the following:

Reason: This section has a lot of permissive language that needs clean up.

Recommended Response (From Staff): Thank you for your comment. Your comment has been accepted with modification. For legal reasons the Standard does not use "shall" in its wording, therefore the language will be changed to "is shaded by trees", "and will be documented."

MOTION: The Motion was made and seconded to accept the Subcommittee's recommendation.

Discussion that took place on the Motion:

- It was clarified that the motion accepts all the changes except for the term "shall".

AMENDMENT: The Amendment was made and seconded to change to "is included to be shaded by trees".

There were no Objections to the Amendment.

VOTE: The Amended Motion carried with 25 in favor, none opposed, and none abstained.

Opposed: None.

Abstained: None.

13 – 11. Substantive. 7.3.4.2:

Comment: *(Add the following to this section)*

OR

Use hardscape surfaces with a solar reflectance (SR) value of at least 0.28. New concrete and concrete masonry without additional colored pigment are deemed to comply without additional testing.

OR

Use an open-grid pavement system (at least 50% unbound).

Maximum = 2 points or N/A

- Two points are earned where 50% or more of hardscape surfaces comply with 7.3.4.2.
- One point is earned where 25%-49% of hardscape surfaces comply with 7.3.4.2.
- Zero points are earned where less than 25% of hardscape surfaces comply with 7.3.4.2.
- Not applicable where there are no hardscape surfaces.

Reason: I have 4 different proposals and comments on this section and this topic. If any of them are accepted, I will be resolved.

In this case, place this in the new 7.3.4.2 as an additional option and use SR rather than SRI.

In this case, place this in the new 7.3.4.2 as an additional option with my comment 43-12 from the previous review, which was previously accepted.

Use solar reflectance (SR) as criteria rather than SRI as in LEED v4 heat island reduction and the IgCC. SR is more appropriate for hardscape surfaces. SRI incorporates thermal emittance which can be assumed to be 0.9 for hardscape materials, so is not relevant. SRI is relevant for metal as in metal roof systems. <http://www.usgbc.org/node/2613950?return=/credits/new-construction/v4/sustainable-sites>

The language from LEED has been modified to:

- Use “hardscape surface” rather than “paving material” as in LEED,
- The deemed to comply phrase for concrete and concrete masonry are added and are consistent with the solar reflectance values measured in Portland Cement Association SN2982, a comprehensive measurement of the solar reflectance of a broad range of concrete mixes. http://www.cement.org/docs/default-source/fc_concrete_technology/sn2982-solar-reflectance-of-concretes-for-lead-sustainable-sites-credit-heat-island-effect.pdf
- The solar reflectance value of 0.28 corresponds to an SRI of 29. I would also be resolved if an SR of 0.30 (IgCC) or 0.33 (LEEDv4) were used for the criteria.

Recommended Response (From Task Group): Thank you for your comment. Your comment has been accepted and the changes have been implemented in the draft Standard. 7.3.4.2 has been reinstated.

Task Group Vote: 4 in favor, 1 opposed, none abstained

MOTION: The Motion was made and seconded to accept the Subcommittee's recommendation.

AMENDMENT: The Amendment was made and seconded to change 10 years to 15 years for consistency with previous actions.

There were Objections to the Amendment.

Discussion took place on the Amendment:

- Concern was raised that making this change would open it up to Public Comment.
- It was stated that 15 years might be too long, depending on the tree. It was stated that trees aren't necessarily the best for shading (i.e. a cottonwood next to a building)
- The question was raised if this comment was actionable.

The Amendment was Withdrawn with no Objection. This discussion may be continued by the Site Subcommittee and brought forward as New Business

Discussion took place on the Motion:

- It was stated that Solar reflections from horizontal surfaces needs to be looked at. Concern was raised that more research needs to be done on albedo and around a long-term solution.
- It was stated that Hardscapes needs to be part of the discussion. The conclusion of the research to accept "hardscape" as an urban heat island impact; "cool pavements". Albedo of concrete research is on aged, not new concrete.
- It was stated that there are other places in the Standard that address carbon. Urban environments are about 5% of a city.

VOTE: The Motion carried with 14 in favor, 3 opposed, and 6 abstained.

Opposed: David Eldridge, Jeff Bradley, John Cross

Abstained: Jane Rodhe, Charles Kibert, Douglas Tucker, Josh Jacobs, Susan Gitlin, Paul Bertram

10 – 1. Substantive. 7.3.4.2:

Comment: Hardscape surfaces have a high SRI. A high SRI is an initial SRI of 29 or greater. New concrete without additional colored pigment is deemed to comply without additional testing. Maximum = 2 points or N/A

- Two points are earned where 50% or more of paved surfaces have a high SRI.
- One point is earned where 25%-49% of paved surfaces have a high SRI.
- Zero points are earned where less than 25% of paved surfaces have a high SRI.
- Not applicable where there are no paved surfaces.

Reason: Section 7.3.4.2 should not be removed from Green Globes. Section 7.3.4.2 is part of a larger section supporting measures that help reduce urban heat island. This credit promotes the use of lighter-colored (i.e., high albedo) hardscapes that have been shown to promote cooler surface and ambient air conditions. The science is clear that high albedo works to reduce urban heat islands. As albedo increases, the percentage of solar energy reflected as light goes up and the percentage of solar energy absorbed as heat goes down. Research and field-testing of high albedo paving

materials and their impact on surface temperature and urban heat goes back more than 30 years. A 2012 literature review for cool pavement by Santamouris includes more than 200 relevant papers.¹

Other relevant work demonstrating the UHI mitigating benefit of cool surfaces includes:

- a. Georgia Tech's high-resolution evaluation of the heat island of Louisville, KY and a similarly granular evaluation of the solutions to mitigate it² Using the Cool Materials scenario (which includes cool roofs and pavements), the city's air temperature fell, on average over the warm season, by 1-3°F in some places.
- b. Notre Dame's study of Chicago (Climate Zone 5) found that cool and green surfaces could cool summer temperatures in the city by 5-7°F.³
- c. Princeton's study of Baltimore looked at surface and near surface temperature impacts from various levels of vegetated cover and reflective surfaces and found that a 30% penetration of cool surfaces reduces surface UHI by 1.8°F. At 50%, the surface UHI falls by nearly 3.6°F. Impact on 2-meter air temperature is less substantial but still positive. The analysis uses a sophisticated urban canopy model developed by Princeton University and studied conditions during a June 2008 heat wave.⁴

The National Academy of Sciences paper cited in the reason statement for removal of this credit evaluated the atmospheric albedo modification needed to counter global warming and did not cover pavement albedo. This is a critical distinction. It is incorrect and misleading to draw conclusions about roof and pavement albedo from larger scale studies of atmospheric albedo modification. To achieve the global warming offsets being evaluated in the NAS study, the albedo modification required would be 165 times the impact of installing cool pavements worldwide.⁵ Attributing the challenges or benefits of such different scales of deployment is simply not possible.

The reason statement for removal also cites a paper called Unintended Consequences by researchers at Arizona State University's National Center of Excellence for SMART Innovations. This paper is a revised version of an earlier white paper developed for the National Asphalt Paving Association that contained a significant number of errors. A full accounting of those errors and inaccuracies is available on the Global Cool Cities Alliance Toolkit.⁶

The revised paper corrects some of the inaccuracies of the original work. However, the authors made a scoping decision to exclude from their literature review any research that looked at the joint effect of albedo and vegetation (of which there is a lot) and include only research that looked at either albedo only or vegetation only. This choice doesn't render the conclusions incorrect, but it does significantly limit how broadly those conclusions should be applied, especially when most real-world applications in cities and building sites will mix both vegetated and albedo cooling solutions. The paper does present new research that concludes that, while surface temperatures are lower on high albedo pavements, the air temperature at 5 feet is unaffected by pavement albedo. The test beds in this analysis, at 4 square meters each, are far too small to cause a temperature change at a height of 5 feet. Thus, the observation that the small plots did not affect air temperature at 5 feet is correct, but the conclusion that pavement does not affect air temperature at 5 feet is unfounded. Surface temperature readings did find that high albedo pavements were cooler than low albedo pavements. It is also worth noting that the temperature data was gathered in December, rather than in the summer when temperature differences would be greater.

The reason statement for removal includes several statements cautioning about a one-size-fits-all approach to reflective pavement in favor of a context specific approach. Section 7.3.4.2 does not

represent a one-size-fits-all approach because it is a voluntary credit, not a blanket requirement. Further, the 7.3.4.2 credit includes ample flexibility for the architect/designer to make determinations on the amount of reflective pavement to deploy, starting at just 20% of the site area, and still earn credit. The credit, as written, allows for site-specific considerations when applying reflective pavement while promoting the use to achieve the scientifically supported benefits.

Available at <http://www.coolrooftoolkit.org/knowledgebase/using-cool-pavements-mitigation-strategy-fight-urban-heat-island-review-actual-developments/>

2 Summary at <https://louisvilleky.gov/government/sustainability/urban-heat-island-project>. Full report at https://louisvilleky.gov/sites/default/files/sustainability/pdf_files/louisville_heat_mgt_report_final_web.pdf

3 Video and written summary at <http://news.nd.edu/news/67500-cooling-down-chicago-how-green-and-cool-roofs-could-impact-urban-climate/>

4 Available at <http://iopscience.iop.org/article/10.1088/1748-9326/9/5/055002>

5 Compares Bala and Nag 2012 (<http://link.springer.com/article/10.1007/s00382-011-1256-1>) and Akbari 2009 (<http://www.energy.ca.gov/2008publications/CEC-999-2008-020/CEC-999-2008-020.PDF>)

6 Available at <http://www.coolrooftoolkit.org/wp-content/uploads/2014/01/Unintended-Consequences-Fact-Check-FINAL2.pdf>

Recommended Response (From Task Group): Thank you for your comment. Your comment has been accepted and the language has been reinstated in the draft Standard.

Task Group Vote: 4 in favor, 1 opposed, none abstained

MOTION: The Motion was made and seconded to accept the Task Group's recommendation.

Discussion took place on the Motion:

- It was clarified that the proposal, points structure and criteria all pertain to the Heat Island Effect Section of the Standard under the Site Assessment Area.

VOTE: The Motion carried with 19 in favor, none opposed, and 1 abstained.

Opposed: None.

Abstained: Jeff Bradley

10 – 2. Substantive. 7.3.4.2:

Comment: ~~Hardscape surfaces have a high SRI. A high SRI is an initial SRI of 29 or greater. New concrete without additional colored pigment is deemed to comply without additional testing.~~

Use paving materials with a three-year aged solar reflectance (SR) value of at least 0.28. If three-year aged value information is not available, use materials with an initial SR of at least 0.33 at installation.

Use an open-grid pavement system¹ (at least 50% unbound).

Maximum = 2 points or N/A

- Two points are earned where 50% or more of paved surfaces comply with 7.3.4.2 have a high SRI.
- One point is earned where 25%-49% of paved surfaces comply with 7.3.4.2 have a high SRI.
- Zero points are earned where less than 25% of paved surfaces comply with 7.3.4.2 have a high SRI.
- Not applicable where there are no paved surfaces.

Reason: LEED v4 recently updated its Heat Island Reduction Credit, including high albedo pavement, shading, and other measures.² The modification proposed here would adopt the language related to high albedo pavement. In addition to providing some useful coherence with LEED v4, this modification fixes two problems with the credit as written:

- 1) Solar Reflectance (SR), rather than Solar Reflectance Index (SRI), is the correct way to measure pavement albedo. SRI includes thermal emissivity which is not easily measurable.
- 2) Aged SR is preferable to Initial SR because it accounts for weathering and usage of the paved surface.

1 USGBC defines this term at <http://www.usgbc.org/glossary/term/5525>

2 The LEED v4 Heat Island Reduction Credit available at <http://www.usgbc.org/node/2613950?return=/credits>

Recommended Response (From Task Group): Thank you for your comment. Your comment has been accepted with modification based on the language provided in comment 13 – 11. Those changes have been implemented in the draft Standard.

Task Group Vote: 4 in favor, none opposed, 1 abstained.

MOTION: The Motion was made and seconded to accept the Task Group's recommendation.

VOTE: The Motion carried with 23 in favor, none opposed, and none abstained.

Opposed: None.

Abstained: None.

Discussion took place after the Vote:

- It was clarified after the vote that language accepted in 13-11 appears in yellow in the Strikethrough and underline draft.
- Staff confirmed that they will attempt to clarify which parts of the Standard are updated and which are not.

13 – 8. Substantive. 7.3.4.2:

Comment: (*Reinstate old 7.3.4.2 with this text*)

7.3.4.2 Hardscape surfaces have a high SRI. A high SRI is an initial SRI of 29 or greater. New concrete and concrete masonry without additional colored pigment are deemed to comply without additional testing. Maximum = 2 points or N/A • Two points are earned where 50% or more of hardscape surfaces have a high SRI.

- One point is earned where 25%-49% of hardscape surfaces have a high SRI.
- Zero points are earned where less than 25% of hardscape surfaces have a high SRI.
- Not applicable where there are no hardscape surfaces.

Reason: Reinstate old section 7.3.4.2 with my comment 43-12 from the previous review, which was indicated as being accepted. I have 4 different proposals and comments on this section and this topic. If any of them are accepted, I will be resolved. The reduced heat island effect for hardscape is much more pronounced than the reduced island effect for walls in 7.3.4.4. This is because when the sun is high in the sky, its energy is much more intense and the solar reflectance on horizontal surfaces is more significant. The science is clear that high albedo (higher solar reflectance) works to reduce urban heat islands. As albedo increases, the percentage of solar energy reflected as light goes up and the percentage of solar energy absorbed as heat goes down.

<http://www.coolrooftoolkit.org/knowledgebase/using-cool-pavements-mitigation-strategy-fight-urban-heat-island-review-actual-developments/> One of the reasons given for deleting this credit was a report by Arizona State University. The 60 major problems with this report are identified here: <http://www.coolrooftoolkit.org/knowledgebase/gcca-responds-to-asu-paper-unintended-consequences/>

Recommended Response (From Task Group): Thank you for your comment. Your comment has been rejected for the following reason: 7.3.4.2 was reinstated in response to comment 13-11.

Task Group Vote: 5 in favor, none opposed, none abstained

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

VOTE: The Motion carried with 21 in favor, none opposed, and 1 abstained.

Opposed: None.

Abstained: Karen Joslin

13 – 9. Substantive. 7.3.4.2:

Comment: (Reinstate old 7.3.4.2 with this text)

Use hardscape surfaces with a solar reflectance (SR) value of at least 0.28. New concrete and concrete masonry without additional colored pigment are deemed to comply without additional testing.

OR

Use an open-grid pavement system (at least 50% unbound).

Maximum = 2 points or N/A

- Two points are earned where 50% or more of hardscape surfaces comply with 7.3.4.2.
- One point is earned where 25%-49% of hardscape surfaces comply with 7.3.4.2.
- Zero points are earned where less than 25% of hardscape surfaces comply with 7.3.4.2.
- Not applicable where there are no hardscape surfaces.

Reason: I have 4 different proposals and comments on this section and this topic. If any of them are accepted, I will be resolved. Reinstate old section 7.3.4.2 with my comment 43-12 from the previous

review, and using solar reflectance (SR) as criteria rather than SRI as in LEED v4 heat island reduction and the IgCC. SR is more appropriate for hardscape surfaces. SRI incorporates thermal emittance which can be assumed to be 0.9 for hardscape materials, so is not relevant. SRI is relevant for metal as in metal roof systems. <http://www.usgbc.org/node/2613950?return=/credits/new-construction/v4/sustainable-sites>

The language from LEED has been modified to:

- Use “hardscape surface” rather than “paving material” as in LEED,
- The deemed to comply phrase for concrete and concrete masonry are added and are consistent with the solar reflectance values measured in Portland Cement Association SN2982, a comprehensive measurement of the solar reflectance of a broad range of concrete mixes. http://www.cement.org/docs/default-source/fc_concrete_technology/sn2982-solar-reflectance-of-concretes-for-leed-sustainable-sites-credit-heat-island-effect.pdf
- The solar reflectance value of 0.28 corresponds to an SRI of 29. I would also be resolved if an SR of 0.30 (IgCC) or 0.33 (LEEDv4) were used for the criteria.

Recommended Response (From Task Group): Thank you for your comment. Your comment has been rejected for the following reason: 7.3.4.2 was reinstated in response to comment 13-11.

Task Group Vote: 5 in favor, none opposed, and none abstained

MOTION: The Motion was made and seconded to accept the Task Group’s recommendation.

VOTE: The motion carried with 22 in favor, none opposed, and 1 abstained.

Opposed: None.

Abstained: Susan Gitlin

Materials

Presented by Subcommittee Chair Charles Kibert

14 – 4. Substantive. 5.1

Comment: ~~risk assessment: a scientific product composition screening-level analysis that determines if a product formulation, article, or constituent chemical will produce a risk, based upon constituent hazards, dose and exposure assessments, and risk characterization.~~

Reason: Risk assessment definitions and approaches are already well-established in the scientific community. EPA feels that it is inappropriate for this standard to create new definitions that are not highly vetted with the public and consistent with those commonly understood by the scientific community. Moreover, this definition focuses on chemical risk assessment and not all uses of the term “risk assessment” in the standard focus on chemicals, per se. (See 6.1.3.1.) To avoid confusion, we recommend deleting the definition entirely. If the Consensus Body feels that a definition for product risk assessment is necessary, we recommend consulting USEPA’s Framework for Human Health Risk Assessment to Inform Decision Making, which represents broad stakeholder consensus on these issues. See <https://www.epa.gov/sites/production/files/2014-12/documents/hhra-framework-final-2014.pdf>

Recommended Response (From Subcommittee): Thank you for your comment. Your comment has been rejected for the following reason: The Standard provides a specific definition for products.

Subcommittee Vote: 9 in favor, none opposed, none abstained.

MOTION: The Motion was made and seconded to accept the Subcommittee's recommendation.

VOTE: The Motion carried with 19 in favor, 1 opposed, and none abstained.

Opposed: Susan Gitlin

Abstained: None.

13 – 3. Substantive. 5.1:

Comment: risk assessment (in Chapter 10 only): a scientific product composition screening-level analysis that determines if a product formulation, article, or constituent chemical will produce a risk, based upon constituent hazards, dose and exposure assessments, and risk characterization.

Reason: The phrase "risk assessment" is used throughout the standard but this definition is only applicable to Chapter 10.

Recommended Response (From Subcommittee): Thank you for your comment. Your comment has been accepted with modification. The definition as been changed to read "risk assessment, product." The Resilience Section no longer references this definition of risk assessment.

Subcommittee Vote: 9 in favor, none opposed, none abstained

MOTION: The Motion was made and seconded to accept the Subcommittee's recommendation.

VOTE: The Motion carried with 21 in favor, none opposed, and 1 abstained.

Opposed: None.

Abstained: Susan Gitlin

18 – 1. Editorial. 5.1

Comment: Revise definition for "risk Assessment"

Reason: The term is used in very different contexts in Section 6.1.3 (Planning for Resilience) and Section 10.3 (Risk Assessment). The proposed definition is written to apply to 10.3, but not 6.1.3. Delete reference to screening level in the definition; a screening-level assessment is one type of risk assessment, but not the only type.

Recommended Response (From Subcommittee): Thank you for your comment. Your comment has been rejected for the following reason: The Consensus Body agrees with the need for clarification. The definition has been changed to read "risk assessment, product." The Resilience Section no longer references this definition of Risk Assessment.

Subcommittee Vote: 9 in favor, none opposed, none abstained.

MOTION: The Motion was made and seconded to accept the Subcommittee's recommendation.

VOTE: The Motion carried with 20 in favor, none opposed, and 1 abstained.

Opposed: None.

Abstained: Rachel Minnery

18 – 7. Editorial. 10.3.1.1:

Comment: Revise first paragraph to read “. . . *based on the product’s intended use, completion of an authoritative exposure model such as [add examples];*”

Reason: Not clear what exposure models would be considered “authoritative;” add examples of models that would qualify

Recommended Response (From Subcommittee): Thank you for your comment. Your comment has been accepted with modification. The language will be changed to “peer reviewed and nationally recognized” in place of “authoritative.” “In accordance with 10.3.2 will also be added to the end of the clause. The Consensus Body has clarified the language. GBI does not specify and endorse specific models.

Subcommittee Vote: 8 in favor, none opposed, and 1 abstained.

MOTION: The Motion was made and seconded to accept the Subcommittee’s recommendation.

Discussion took place on the Motion:

- Concern was raised that the term “nationally recognized” isn’t defined, where as “peer reviewed” has a standard and well-known definition.

AMENDMENT: The Amendment was made and seconded to strike “nationally recognized”.

There were Objections to the Amendment.

Discussion took place on the Amendment:

- It was stated that peer reviewed can be a limited group with a process that no one is aware of. The question was raised whether peer reviewed is broader than “nationally recognized.” It was recognized that there can be a problem with some peer review processes, but it is still a more definable term than “nationally recognized”. It was stated that the use of both terms strengthens what is trying to be said in this paragraph.

VOTE: The Amendment carried with 16 in favor, 6 opposed, and 1 abstained.

Opposed: Bill Freeman, Jeff Bradley, Jane Rodhe, Kent Sovocool, George Thompson, John Cross

Abstained: Susan Gitlin

Discussion took place on the Amended Motion:

- It was pointed out that a grammatical change is necessitated to make “an” “a” before “peer-reviewed”. There were no Objections.

VOTE: The Amended Motion carried with 18 in favor, 1 opposed, and 1 abstained.

Opposed: Rachel Minnery

Abstained: Susan Gitlin

22 – 48. Substantive. 10.6.1.2:

Comment: A final waste management ~~is a summary report is~~ completed after construction ~~that documents~~ documenting the results of the project that includes all waste and recycling/reuse materials, their weight/volume, recycling rate for each line item on the plan, and an overall recycling rate for the project.

The Summary Report will also includes:

- ~~An overall recycling rate for the project;~~
- ~~Material categories;~~
- ~~Amounts of materials salvaged, reused, recycled, donated, sold or returned to manufacturers with takeback programs, as well as the achieved recycling rate for each line item;~~
- Names of take back programs, recyclers, salvage and reuse companies and/or material exchanges that were used;
- Records of donations, sales, recycling and landfill/incinerator manifests, weight tickets, hauling receipts, and invoices;
- For each recycling facility used, it should be noted whether the recycling operation is certified through a state, local, or a third-party independent certification.

The report includes Include a separate average recycling rate . . .

Include the name and contact information for the ~~person(s) responsible for developing and implementing the waste management plan, the person responsible for the off-site facility recycling rate and the person responsible for the content of the final waste management report.~~

Reason: The requirements for 10.6.1 have become too complicated, especially for the number of points achieved. The items proposed to be struck from the summary report are already listed in the first paragraph.

Recommended Response (From Task Group): Thank you for your comment. Your comment has been accepted with modification and changes have been implemented in the draft Standard. Whether or not the facility is certified the additional contact information is necessary.

MOTION: The Motion was made and seconded to accept the changes as recommended by the Subcommittee.

Discussion took place on the Motion:

- A request was made to postpone discussion of this comment so the Consensus Body has time to review the language changes.
- It was stated that in energy modeling the Consensus Body decided this shouldn't be a requirement, but here it is required.
- Some stated that they feel strongly that it should be certified.
- Others echoed the sentiment that this be given more time for Consensus Body to review. It was stated that the language is sloppy and needs to be cleaned up first.

MOTION TO POSTPONE: The Motion was made and seconded to postpone discussion until the next Consensus Body meeting to allow members to review changes to the language

VOTE: The Motion carried with 20 in favor, none opposed, and 1 abstained.

Opposed: None.

Abstained: William Carroll

8 – 31. Editorial. 10.6.1.4

Comment: The range of values indicated in the credit value assignments in the right column are incorrect.

Four points are earned for more than 75% or greater.

- Three points are earned for ~~for 50% to <75%~~~~≥50% – <75%.~~
- Two points are earned for ≥25% - <50%
- No points are earned for less than 25%. • One additional point is earned for facilities that have verified their annual average recycling rate from an independent third party organization.

Reason: As currently written with the [symbol] and [symbol] signs, a project at 50% would simultaneously qualify for two credits and three credits. A project at 75% would qualify for three credits and four credits. A simple restructuring of the range format will resolve the issue. Furthermore, it would be easier to read if the list switched the location of the last two line items.

Recommended Response (From Subcommittee): Thank you for your comment. Your comment has been rejected for the following reason: For three points, it's greater than or equal to 50% and for two points it's less than 50%

Subcommittee Vote: all in favor

MOTION: The Motion was made and seconded to accept the Subcommittee's decision.

VOTE: The motion carried with 23 in favor, none opposed, and none abstained.

Opposed: None.

Abstained: None.

Minnery1. 10.3:

Reason or Comment: Several "risk assessments" exist. Revise title to reduce confusion. The suggested term to the right is consistent with how the American Institute of Architects refers to the issue.

Revision Requested: Revise to "Materials Risk Assessment" and reflect change throughout this section.

Recommended Response (Task Group): Thank you for your comment. Your comment has been accepted with modification. The title of 10.3 will be changed to "Product Risk Assessment." Every instance of the term will be changed to "product risk assessment."

MOTION: The Motion was made and seconded to accept the Subcommittee's recommendation.

Discussion took place on the Motion:

- It was clarified that “Product Risk Assessment” is the title and “risk assessment, product” is the defined term.

VOTE: The Motion carried with 22 in favor, none opposed, and none abstained.

Opposed: None.

Abstained: None.

Minnery2. 5.1

Reason or Comment: risk assessment” yet needs to be clarified

Revision Requested: Revise to “materials risk assessment”

Recommended Response (From Task Group): Thank you for your comment. Your comment has been accepted with modification. The term will be changed to “risk assessment, product.”

MOTION: The Motion was made and seconded to accept the Subcommittee’s recommendation.

VOTE: The Motion carried with 22 in favor, none opposed, and 1 abstained.

Opposed: None.

Abstained: Susan Gitlin

Dixon1. 10.3:

Reason or Comment: • Remove the following: o “and the results are reported in the generic classification of Green (least risk), Yellow (second least risk), Orange (second most risk), and Red (most risk).” • This is completely arbitrary and user defined. It has no validity. User defined scales of risk are inappropriately required and rewarded.

Revision Requested: Remove user-defined risk assessment “results” requirement.

Recommended Response (From Task Group): Thank you for your comment. Your comment has been rejected for the following reason: This is not arbitrary. It is taking the data and putting it into a format that’s standardized for designers

MOTION: The Motion was made and seconded to accept the Subcommittee’s recommendation.

Discussion took place on the Motion:

- It was clarified that there was no Risk Assessment of any kind in the 2010 Standard.
- It was stated that the color coding is easier to understand and that there is no standardized method of risk-level reporting. It was stated that other systems are very similar to each other and that ANSI 355 doesn’t require a specific color coding scheme.
- It was stated that the Standard did not create the numbers/rankings, but has pulled them from other sources.
- The color coding was clarified and it was discussed that anyone outside specific industries might not know how to respond to it.

- It was stated that the intent is to offer alternatives.
- The question was raised if there is a way to “game” the system. It was clarified that users are being incentivized to use specific products. Others disagreed about what’s being incentivized.
- It was stated that the project team doesn’t do anything except gather the information. There was discussion around the capability of the project team steering themselves in the right direction and making informed decisions.

VOTE: The Motion carried with 12 in favor, 9 opposed, and 2 abstained.

Opposed: David Eldridge, Don Horn, Tien Peng, John Cross, Mike Cudahy, Susan Gitlin, Gord Shymko, Chris Dixon, Paul Bertram

Abstained: Allan Bilka, Rachel Minnery

Dixon2. 10.6.3:

Reason or Comment: There is no standard referenced to assess whether or not significant supply chain waste reduction was achieved. It appears to be completely self-reported, zero verification required. • This is an overly complicated credit that is directed not to the project design team, but to manufacturers, and is misplaced in a green building rating system. • Project teams will not have the means or the impetus to chase down the myriad requirements of this section for materials incorporated into the project.

• Recommended documentation includes construction documents and manufacturer’s specifications, neither of which document the requirements of this credit.

Revision Requested: Remove this section in its entirety.

Recommended Response (Subcommittee): Thank you for your comment. Your comment has been rejected for the following reason: This is based on standards in listed in the informational reference section.

Subcommittee Vote: 4 in favor, 3 opposed, 2 abstained

MOTION: The Motion was made and seconded to accept the Subcommittee’s recommendation.

Discussion took place on the Motion:

- It was stated that there is a need for this, but there is no Standard for this. It would be difficult for the project team to obtain the information needed and existing information is self-promoted, not verified. Concern was raised that this is a very myopic view of a supply chain process.
- It was stated that this comment should be reworked by the Subcommittee or the criterion should be deleted.
- One Subcommittee member gave the history of how this response was drafted. The speaker agreed that the criterion should be redrafted, but that it shouldn’t be deleted.

MOTION: The Motion was made and seconded to send the comment back to the Subcommittee with the goal of making the criterion less arbitrary and ensuring that the criterion recognizes the various waste streams that come into the process.

VOTE: The Motion carried with 18 in favor, 1 opposed, and 2 abstained.

Opposed: Angela Tin

Abstained: Jeff Bradley, Jane Rodhe

Dixon3. 10.7.2:

Reason or Comment: • There is nothing of substance in this credit: No reference standard, no prescriptive requirements, no way to accurately assess whether or not anything was done for any meaningful environmental benefit.

Revision Requested: Remove this section in its entirety.

Recommended Response (Subcommittee): Thank you for your comment. Your comment has been rejected for the following reason: Reviewers are required to review and develop plans for deconstruction and the Consensus Body feels this is an adequate criterion for points in this developing area.

Subcommittee Vote: 7 in favor, none opposed, 1 abstained.

MOTION: The Motion was made and seconded to accept the Subcommittee's recommendation.

Discussion took place on the Motion:

- It was stated that without guidance, there is no way to determine what this means. The question was raised about how the assessor would be able to determine if a building would be deconstructed if it's a 100 year building. Concern was raised that it's impossible for assessors to determine how this criterion will be implemented that far into the future.
- It was stated that there's a Canadian Standard based on this premised that's doing well, the concept is doable.
- The Consensus Body was reminded that it will be possible to continue to refine this criterion during Continuous Maintenance.
- It was clarified that these informational references were included in the previous version of the criterion.

AMENDMENT: The Amendment was made and seconded to add an informational reference CSAZ783-12 Deconstruction of Building and Their Related Parts. Published by Canadian Standards Association. This reference would be Informational only.

There were no Objections to the Amendment.

Discussion took place on the Amendment:

- It was stated that if it's only information, it can just be added.
- One speaker stated that they are still hesitant about this and that they have difficulty imagining a building that can be deconstructed down to the last individual substance. It was reiterated that there still needs to be more guidance.

VOTE: The motion carried with 22 in favor, 1 opposed, and none abstained.

Opposed: Chris Dixon

Abstained: None

Meeting ended at 5:37 PM CT---

Friday, May 19, 2017

Welcome & Roll Call

Secretariat Assistant, Emily Randolph welcomed participants and conducted roll call to establish quorum. The anti-trust statement and code of conduct were reviewed and participants were requested to comply with both fully.

Randolph reminded members that all are welcome to participate in the discussion provided participants raise their hands. Hands will be called on first come-first serve.

On Day 3 of this meeting no members voted using voting alternates and five members voted using a proxy (Don Horn for Susan Gitlin (for part of the meeting), Jeff Bradley for Jane Rohde, Gord Shymko for Chris Dixon, Tien Peng for Rachel Minnery (for part of the meeting) Karen Joslin for Paul Bertram).

Administrative Items

Chair Mike Lehman made his opening comments thanking everyone for their time, expertise. Lehman described the agenda for the day, focusing on Site, Indoor Environment and New Business.

Second Public Comment Period

Site:

Presented by Subcommittee Chair Gregg Bergmiller

13 – 10. Substantive. 7.3.4.2:

Comment: (Add the following to this section)

OR

Hardscape surfaces have a high SRI. A high SRI is an initial SRI of 29 or greater. New concrete and concrete masonry without additional colored pigment are deemed to comply without additional testing.

Maximum = 2 points or N/A

- Two points are earned where 50% or more of hardscape surfaces have a high SRI.
- One point is earned where 25%-49% of hardscape surfaces have a high SRI.
- Zero points are earned where less than 25% of hardscape surfaces have a high SRI.
- Not applicable where there are no hardscape surfaces.

Reason: Add the old section 7.3.4.2 to the new 7.3.4.2, with my comment 43-12 from the previous review, which was previously accepted.

In this case, place this in the new 7.3.4.2 as an additional option.

I have 4 different proposals and comments on this section and this topic. If any of them are accepted, I will be resolved.

The reduced heat island effect for hardscape is much more pronounced than the reduced island effect for walls in 7.3.4.4. This is because when the sun is high in the sky, its energy is much more intense and the solar reflectance on horizontal surfaces is more significant.

The science is clear that high albedo (higher solar reflectance) works to reduce urban heat islands. As albedo increases, the percentage of solar energy reflected as light goes up and the percentage of solar energy absorbed as heat goes down.

<http://www.coolrooftoolkit.org/knowledgebase/using-cool-pavements-mitigation-strategy-fight-urban-heat-island-review-actual-developments/>

One of the reasons given for deleting this credit was a report by Arizona State University. The 60 major problems with this report are identified here:

<http://www.coolrooftoolkit.org/knowledgebase/gcca-responds-to-asu-paper-unintended-consequences/>

Recommended Response (From Task Group): Thank you for your comment. Your comment has been rejected for the following reason: 7.3.4.2 was reinstated in response to comment 13-11.

Task Group Vote: 5 in favor, none opposed, none abstained

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

Discussion took place on the Motion:

- There was concern expressed around the use of “and/or” as it doesn’t provide clarity.
- It was clarified on the motion: to reject the comment and that grammatical concerns can be addressed during the editorial review.

VOTE: The Motion carried with 18 in favor, none opposed, and 1 abstained

Opposed: None.

Abstained: Susan Gitlin

15 – 1. Substantive. 7.3.4.2:

Comment: 7.3.4.2 Paved Hardscape surfaces have a high SRI. A high SRI is an initial SRI of 29 or greater. New concrete without additional colored pigment is deemed to comply without additional testing. Maximum = 2 points or N/A · Two points are earned where 50% or more of paved surfaces have a high SRI. · One point is earned where 25%-49% of paved surfaces have a high SRI. · Zero points are earned where less than 25% of paved surfaces have a high SRI. · Not applicable where there are no paved surfaces.

Reason: I am writing to recommend that Section 7.3.4.2 not be removed from the green building assessment protocol for commercial buildings. We have some recent research results that I am sharing because I think they will help to substantiate the benefits of high SRI surfaces. I have summarized the key points of our research results here and have submitted another document with additional details on results, including figures, and methods.

Hardscape albedo (or SRI) impacts the climate through two mechanisms: radiative forcing and building energy demand. Evaluating the effectiveness of albedo modification strategies involves quantifying the NET impacts from both.

Surface albedo modifications through the deployment of reflective roofs and pavements have been considered as one of the adaptive strategies for mitigating the urban heat island effect and the local impacts of global warming. There are two known mechanisms associated with the impact of reflective surfaces. Directly, high-albedo surfaces reflect more shortwave radiation, altering the radiative balance at the top-of-atmosphere, and as a result imposing a radiative forcing (RF). Indirectly, reflective materials tend to absorb less sunlight, decreasing the amount of heat transferred to the atmosphere and therefore reducing the air temperature. The incident radiation and ambient temperature changes can affect building energy demand (BED).

Both the direct and indirect impacts of reflective surfaces have been intensively investigated by researchers through computational modeling approaches and observational studies. Installation of cool surfaces has been demonstrated by many studies to be a cost-effective way to reduce ambient urban temperatures and save building energy to some extent. However, none of the studies compare the relative magnitudes of RF and BED in a consistent manner, which may bias the evaluation of the effectiveness of albedo modifications. We need to take a more comprehensive approach in assessing the net impacts of pavement albedo modification strategies in urban areas.

The relative magnitude of RF and BED depends on context, but usually RF is more significant and leads to net benefits from increasing hardscape albedo.

In order to compare the relative magnitudes of RF and BED impacts due to pavement albedo modifications in different urban neighborhoods with different climate conditions, we conducted a case study for two selected urban areas, Phoenix and Chicago, where we apply an adapted analytical model for RF and a hybrid model framework for BED to estimate the impacts of increasing pavement albedo from 0.1 to 0.5.

The impacts of RF and BED are translated into global warming potential (GWP) savings and normalized to kg CO₂ equivalent per square meter of pavement modified. The results show that increasing pavement albedo results in temperature reductions and RF and GWP savings across all neighborhoods in both Phoenix and Chicago. However, the impacts of changing pavement albedo on BED vary by climatic conditions and urban morphology. In densely-built high-rise neighborhoods, reflective pavements create net burdens on building energy consumption. This is largely due to the multiple reflection of radiation that is trapped between tall buildings in those dense neighborhoods. However, all other neighborhoods show a net benefit from increasing albedo. Considering the fact that high-rise and densely-built districts only make up a very small fraction (~5%) of urban areas and do not usually contain significant hardscapes besides roads and sidewalks, the expected total benefits from increasing hardscape albedo at urban scale would still be positive.

Supporting increased albedo for hardscapes in new or renovation projects is meaningful and a relatively low-cost and low-risk endeavor.

Albedo adjustments in new or retrofit projects have minimal cost implications when compared with modifications of existing surfaces because the hardscapes are being created to serve a primary function, such as supporting a vehicle or pedestrian load, so any cost associated with albedo modification is minor in comparison, if it is necessary at all. This is in contrast to large-scale albedo modification proposed in geoengineering, where there is significant cost and uncertainty. In the

climate science community, albedo modification techniques are generally referred to as geoengineering, also known as climate intervention, which is the deliberate large-scale intervention in the Earth's natural systems to counteract adverse climate change. These techniques generally include stratospheric aerosol injection, marine cloud brightening and large-scale surface albedo modifications. A report by the National Academies of Sciences (National Research Council, 2015) discourages the deployment of large scale geoengineering due to large uncertainties and risks associated with their effectiveness and potential side effects. However, it's important to note the difference between surface albedo modification techniques using hardscapes and other geoengineering approaches. The effectiveness of surface albedo modification techniques at local scale have been demonstrated in many empirical studies and numerical simulations. Furthermore, unlike stratospheric aerosol injection and marine cloud brightening that involve large costs and high uncertainty, deploying reflective roofs and hardscapes are perhaps the only feasible surface albedo modification methods that are at low cost and already have a good track record of local implementations.

Recommended Response (From Task Group): Thank you for your comment. Your comment has been accepted with modification. The section has been reinstituted in the draft Standard. Paved has been removed in favor of "hardscape" throughout the section.

Task Group Vote: 4 in favor, none opposed, 1 abstained.

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

Discussion took place on the Motion:

- It was clarified that the language isn't being reinstated in response to this comment, but other items were changed.

Editorial Change: Add "Other modifications have been made in response to other comments."

There were no Objections to the Editorial Change.

VOTE: The Motion carried with 21 in favor, none opposed, and 1 abstained.

Opposed: None.

Abstained: Susan Gitlin

Discussion took place following the vote:

- There was discussion around the language of 7.5.1.3, clarifying that project teams can do any combination to earn up to 6 points. It was stated that the goal is to change how project teams earn points. Teams can add up the percentages of surfaces covered. It was stated that it should say "and" if it's 50% and project teams get 2 points. It was stated that "and/or" isn't needed but rather "any combination of strategies". It was stated that the way the language is currently written, all three need to be achieved.
- It was stated that 40-50% of the urban environment is paved.

MOTION: The Motion was made and seconded add the charging language under 7.3.1.2 remove "and/or", make the points 6 for 50% or more of hardscape surfaces, three points for 25-49% with a maximum of 6 points, to include the open grid pavement system (at least 50% unbound) under 7.3.4.2.3, and approve the restructuring by making 7.3.4.2.1 – 7.3.4.2.3 Hardscape.

AMENDMENT: The Amendment was made and seconded to change “Three points are earned for 25% to less than 50%”.

There were no Objections to the Amendment.

AMENDMENT: The Amendment was made and seconded to state “either the building project of other existing building” in place of “either new or existing”.

There were no Objections to the Amendment.

Discussion took place on the Amended Motion:

- It was stated that the restructuring keeps a level of consistency. The speaker was against the Motion. It was stated that shading may have different environmental benefit from permeable surfaces, or a light-colored surface. It was stated that each aspect has different benefits.
- The question was raised whether this addresses every section it needs to. It was clarified that the Consensus Body is voting on all of 7.3.4.2.

VOTE: The Motion carried with 15 in favor, 6 opposed, and 3 abstained.

Opposed: Jeff Bradley, Jane Rodhe, John Cross, Rachel Minnery, Josh Jacobs, Susan Gitlin

Abstained: David Eldridge, Bill Freeman, George Thompson

Aff. Sovocool. 7.5.1.3:

Comment: Substantive. Typographical error on right side column.

Revision Requested: Tree points are earned if between greater than 50 and ~~745~~ 75% of plants are native.

Staff Notes: The “4” is struck through, however it isn’t easy to see.

Recommended Response: Thank you for your comment. Your comment has been accepted but no changes were implemented in the draft Standard. The “4” was struck through in the public comment draft, however it was difficult to see given the placement of the strikethrough where the cross bar of the 4 appears.

Subcommittee Vote: 9 in favor, none opposed, none abstained

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

Discussion took place on the Motion:

- It was stated that this method of “less than or equal to” should be used throughout the document.
- It was clarified that this is regarding the yellow and red language shown on the screen. 13-11 was previously accepted.

VOTE: The Motion carried with 23 in favor, none opposed, and none abstained.

Opposed: None.

Abstained: None.

14 – 10. Substantive. 7.7.1:

Comment: ~~Excluding athletic fields and agriculture, greater than 50% of the vegetation on site achieves points for Section 7.5.1.3 for drought tolerant plants and greater than 50% of the vegetation on site achieves points for Section 7.5.1.4 for native plants. The project achieves, at a minimum, the number of points under 7.5.1.3 associated with having greater than 50% of the vegetated area planted with drought tolerant plants. Dedicated athletic fields and agricultural areas need not be included in the area calculations; and The project achieves, at a minimum, the number of points under 7.5.1.4 associated with covering greater than 50% of the vegetated area with native plants. Dedicated athletic fields and agricultural areas need not be included in the area calculations;~~

Reason: The new language, unfortunately, has some flaws. Twice it suggests that a percentage of the site achieve points. However, sections of sites or buildings do not achieve points, per se. Rather, a building project achieves points. The site needs to meet certain criteria. Moreover, the way it is written, it could possibly be interpreted to say that only 50% of a site needs to be evaluated in order to achieve the criteria in sections 7.5.1.3 and 7.5.1.4. That is not what was intended by the authors. Rather, the intent was that the site qualify for the levels in 7.5.1.3 and 7.5.1.4 that are associated with at least 50% of the site having native plants and at least 50% of the site having drought tolerant plants.

Recommended Response (From): Thank you for your comment. Your comment has been accepted and the changes have been implemented in the draft Standard.

Subcommittee Vote: 5 in favor, 2 opposed, 2 abstained

A request was made for the Consensus Body to begin with an overarching discussion on Section 7.7 as a whole as opposed to focused on subsection 7.7.1.

There were Objections to this Request and the question was put to the Chair. The Chair decided to move forward as outline in the original agenda.

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

Discussion took place on the Motion:

- Speaking in opposition to the change, it was stated that the language in the public comment draft is already specific and accurate enough and represents compromise in the Subcommittee. Additionally, the last sentence of the reason is not true. 50 percent of the *vegetated area* would have native plants.
- The commenter stated that their organization was concerned that this Section potentially takes out native plant vegetation. The speaker felt that the language could be interpreted so that only 50% of the area has to be evaluated and achieve the native plants requirement.. Overall, the commenter's goal was to clarify the language.
- The opinion was raised that original language is clear enough, speaking against the motion.

- There was discussion to attempt to reword the language so “greater than 50 percent of vegetation” isn’t written twice. One speaker suggested there are two separate issues being addressed and that it’s impossible to write them as an “and”. The speaker agreed that the language is confusing.
- An assessor stated that the original language is clear from an assessment perspective. It was stated that 7.5.1.3 and 7.5.1.4 have varying levels of percentages to achieve. The way it’s currently written, 50% of the vegetation has to achieve points. The intention is unclear. The speaker was concerned that the language lost its specificity that the entire site is being evaluated and that at least 3 points will be awarded.
- It was stated that if the issue is area vs. plants, the language should use area.
- The sentiment was echoed that a user guide could reflect additional information to alleviate confusion.
- The question was asked if the language can say “strategy” as opposed to “points”. It was stated that there are environmental impacts so there needs to be demonstration of some level of protection. Concern was raised that it’s not ideal to refer to another section in a section, however that was the only way the Subcommittee could move forward.
- The question was asked how this language will affect the User’s Guide. It was clarified that anyone from the Consensus Body will be able to submit information for use in the User’s Guide.

VOTE: The Motion failed with 7 in favor, 11 opposed, and 5 abstained

Opposed: Tien Peng, Greg Johnson, Jeff Bradley, Jane Rodhe, Gary Keclik, Gord Shymko, Chris Dixon, John Cross, Charles Kibert, Allan Bilka, Mike Cudahy

Abstained: Paul Bertram, Kent Sovocool, Bill Freeman, George Thompson, Douglas Tucker

MOTION: The Motion was made and seconded to reject the comment with the reason that We believe the existing language meets the intent of the language, but to add clarification, we will recommend to staff that the user’s guide address the application of this Section.

Discussion took place on the Motion:

- Concern was raised that most project teams don’t use user guides, but refer to the Standard.
- The opinion was voiced that if the Consensus Body prefers referring to a user’s guide, then this language should go back to the Subcommittee for refinement and for inclusion.
- It was stated that rather than sending this back to Subcommittee, once the draft user’s guide is available, it will go back to the respective Subcommittee for review. It was stated that there is the possibility of holding a separate webinar where the Consensus Body Members will be invited to attend to assist in the drafting a user’s guide.

AMENDMENT: The Amendment was made and seconded to modify the Motion to Accept with Modification. Modify the language as follows: replace “the vegetation on site achieves” with “vegetative area” and insert “the project achieves at a minimum” between agriculture and greater than 50%.”

Point of Order: The current motion on the floor either needs to be thrown out because this amendment is not a minor change.

Clarification: The Parliamentarian stated that this is an acceptable amendment.

There were Objections to the Amendment.

MOTION to REFER: The Motion was made and seconded to send back to the Subcommittee with the goal of clarifying the language and coming to a consensus to achieve reasonable and understandable language.

Discussion took place on the Motion to Refer:

- The opinion was voiced that current language is agreeable. The Speaker was against the Motion to refer.

VOTE: The Motion failed with 9 in favor, 11 opposed, and 3 abstained

Opposed: Tien Peng, Greg Johnson, Jeff Bradley, Jane Rodhe, Gary Keclik, Gord Shymko, Chris Dixon, Charles Kibert, Allan Bilka, Gregg Bergmiller, Mike Cudahy

Abstained: Bill Freeman, George Thompson, Douglas Tucker

MOTION TO DEFER AND REFER: The Motion was made and seconded to defer the discussion of the Comment and refer back to the subcommittee to write language for the User Guide.

Discussion took place on the Motion to Defer and Refer:

- Concern was raised that referring to the Subcommittee to create language for a user guide sets a bad precedent. The speaker was strongly against the motion.
- It was clarified that the creation of a user guide is beyond the scope of ANSI Standard Revision Process and it will not be subject to Consensus Body review.
- It was stated that rejecting the comment doesn't address all the comment unless the user guide content is taken into consideration.

VOTE: The Motion to Defer and Refer failed with 4 in favor, 14 opposed, and 5 abstained

Opposed: David Eldridge, Greg Johnson, Jeff Bradley, Jane Rodhe, Gary Keclik, Gord Shymko, Chris Dixon, Mike Cudahy, Allan Bilka, Charles Kibert, John Cross, Rachel Minnery, Douglas Tucker, Angela Tin

Abstained: Bill Freeman, Josh Jacobs, Karen Joslin, Paul Bertram, George Thompson.

MOTION: The motion was made and seconded to Call the Question of the Amendment.

VOTE: The Motion to Call the Question carried with 25 in favor, none opposed, and none abstained

Opposed: None

Abstained: None

VOTE: The Amendment failed with 10 in favor, 11 opposed, and 4 abstained.

Opposed: Greg Johnson, Jeff Bradley, Jane Rodhe, Gord Shymko, Chris Dixon, Charles Kibert, Allan Bilka, Mike Cudahy, Nicole Dovel-Moore, Douglas Tucker, Angela Tin

Abstained: John Cross, Bill Freeman, Gary Keclik, George Thompson

MOTION: The motion was made and seconded to Call the Question on the original Motion.

VOTE: The Motion to Call the Question carried with 22 in favor, none opposed, and 2 abstained.

Opposed: None.

Abstained: Don Horn, Susan Gitlin

VOTE: The Original Motion carried with 11 in favor, 9 opposed, and 5 abstained.

Opposed: David Eldridge, Don Horn, Kent Sovocool, John Cross, Karen Joslin, Paul Bertram, Rachel Minnery, Nicole Dovel-Moore, Susan Gitlin,

Abstained: Bill Freeman, George Thompson, Douglas Tucker, Gary Keclik, Angela Tin

Indoor Environmental Quality:

Presented by subcommittee Chair Mike Lehman

At this time, Consensus Body Chair Mike Lehman conceded Chairmanship of the meeting to Vice Chair Charles Kibert in order to present the Indoor Environmental Quality Subcommittee's Comments.

5-4. Editorial. 11.2

Comment: Either list web links for all listed standards or none, please stay consistent. As an example, all web site links could simply be listed in Chapter 12 instead of in the body. Also ensure that all standard dates are accurate as requirements have changed since some of the listed programs certification program dates.

Reason: Please see change request

Recommended Response (From Staff/Chair): Thank you for your comment. Your comment has been considered and the Consensus Body agrees with the Comment in Principle and Changes were made were necessary to ensure that all references are current as of the date of publication of the draft Standard to the best of the Body's knowledge.

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

VOTE: The motion carried with 20 in favor, none opposed, and none abstained.

Opposed: None

Abstained: None

16-2. Substantive. 11.5.2:

Comment: 11.5.2 Sound Masking System

11.5.2.1 The building design incorporates a sound masking system with an overall level specified to an A-weighted decibel (dBA) value within the following range:

- 11.5.2.1.1 Offices

- o Open: 45-48dBA

- o Enclosed: 35-45dBA

- o Meeting/Conference: 30-45dBA

- o Circulation: 45-48dBA

- 11.5.2.1.2 Healthcare

- o Patient room: 40-48dBA

- o Exam/treatment room: 35-45dBA

- o Waiting area: 45-48dBA

- o Staff Area (open): 45-48dBA

- o Staff area (enclosed): 35-45dBA

- o Circulation: 45-48dBA

- 11.5.2.1.3 Other

- o All other areas where speech privacy, concentration, or sleep/relaxation is required: 35-48-dBA

11.5.2.2 The measured overall level is within 0.5dBA of that specified.

11.5.2.3 The measured spectrum conforms to the National Research Council's COPE Optimum Masking frequency range and 1/3 octave band levels, or the project acoustician's specified 1/3 octave band levels, within +/-2.0dB.

Reason: *The full substantiation of this credit is detailed in a supporting attachment: GG11.5.2 *Reason For Proposed Revision (Moeller1-6)** In summary, a masking credit is essential and must be included for the following reasons (as more fully outline in the attached): - Masking has been a widely-accepted part of acoustical design for decades

- Green Globes would be an outlier in omitting masking with respect to current standards 9including other Green Globes standards
- Independent post-occupancy studies show clearly that poorly crafted or missing acoustical credits in rating systems lead to low occupant satisfaction.
- Masking contributes uniquely to the acoustical performance of a space with benefits not provided by any other design elements. It is the only method by which to precisely control the background sound level.
- Spaces which are otherwise acoustically well-designed, but omit masking, yield substantially reduced facility performance.

The discussion must no longer be whether masking is included, but how to do it properly.

Moeller1 and Moeller2 are provided as options for this credit, with the intent of one being selected. Moeller2 is the alternative recommendation for the reasons fully outlined in the attachment. In summary, it is far better than no credit, but more restrictive in terms of project types and masking levels.

Recommended Response (From Task Group): Thank you for your comment. Your comment has been accepted with modification. The language for Staff Area (open) and Staff Area (enclosed) to align with FGI Guidelines language.

MOTION: The Motion was made and seconded to accept the response from the Task Group.

Discussion took place on the Motion:

- It was clarified that this Section should be focused on reducing as opposed to masking the noise. The speaker was against the motion.
- It was stated that the goal is to improve the indoor environment and that masking is an acceptable method for improving the indoor environmental quality. It was stated that it's not just a matter of how much noise, but also the quality of the noise (i.e. white noise).
- It was stated that Noise level Standards are set through ASHRAE for maximums, but there are no minimums. For architectural acoustics, speech privacy is essential which requires background sound. Before it was just HVAC mechanisms and if not, overbuilding walls. The Standard is an opportunity to address speech privacy while preventing overbuilding. Technologies have evolved exponentially so it's not antiquated as it's thought. Modern Speech Privacy is controlled via speakers which are set according to standards generally accepted by the industry. (i.e. National Resource Council of Canada)
- It was explained that "White Noise" is different from today's technology. White noise used to need to be 45-48 decibels. Now, it's determined there needs to be a minimum 30-35 decibels which is known as "Masking". It was stated that if Masking is applied inappropriately, it can have detrimental effects of occupants needing to speak louder, which is not being advocated here. The key to good masking is occupants don't realize it's there.
- It was explained that Absorption, Masking and Blocking are the three integral parts for effective sound control.
- It was stated that there needs to be a discussion on where the points will come from. It was pointed out that the way points are structured, projects can earn points at initial certification but don't earn points at recertification.

AMENDMENT: The Amendment was made and seconded to change to "within the following spaces and ranges."

There were no Objections to the Amendment.

VOTE: The Motion carried with 17 in favor, 5 opposed, and 1 abstained.

Opposed: Don Horn, John Cross, Mike Lehman, Josh Jacobs, Susan Gitlin

Abstained: Allan Bilka

Discussion took place after the Vote:

- It was stated that there needs to be some direction from the Consensus Body to the Work Group where the points are coming from.
- It was clarified that the Indoor Environmental Quality Subcommittee will go back and assess the Points and present recommendations to the Consensus Body. Any direction will come from the Subcommittee, not from the Consensus Body.
- It was stated that this is adding an entirely new section is being added to the Assessment Area.

***MOTION TO MOVE ON: The motion was made, seconded and carried to "move one" with 19 in favor, 1 opposed, and 2 abstained.**

Opposed: Josh Jacobs

Abstained: Don Horn, Susan Gitlin

*Parliamentarian advises that this type of motion is not necessary.

16-1. Substantive. 11.5.2:

Comment: 11.5.2 Sound Masking System 11.5.2.1 Included in areas benefitting from controlled minimum background sound levels. • The measured overall level is 48dBA or less and within 0.5dBA of that specified for each area.

• The measured spectrum conforms to the National Research Council's COPE optimum Masking frequency range and 1/3 octave band levels, or the project acoustician's specified 1/3 octave band levels, within +/-2.0dB.

Reason: *The full substantiation of this credit is detailed in a supporting attachment: GG11.5.2 *Reason For Proposed Revision (Moeller1-6)** In summary, a masking credit is essential and must be included for the following reasons (as more fully outline in the attached): - Masking has been a widely-accepted part of acoustical design for decades
- Green Globes would be an outlier in omitting masking with respect to current standards 9including other Green Globes standards
- Independent post-occupancy studies show clearly that poorly crafted or missing acoustical credits in rating systems lead to low occupant satisfaction.
- Masking contributes uniquely to the acoustical performance of a space with benefits not provided by any other design elements. It is the only method by which to precisely control the background sound level. - Spaces which are otherwise acoustically well-designed, but omit masking, yield substantially reduced facility performance.

The discussion must no longer be whether masking is included, but how to do it properly.

Moeller1 and Moeller2 are provided as options for this credit, with the intent of one being selected. Moeller1 is the preferred credit approach for the reasons fully outlined in the attachment. First, the credit may be applied to the full scope of projects seeking Green Globes certification, rather than a limited list. Second, the credit ensures quality through tight tolerance specifications while leaving the level of masking required up to the acoustical engineer and/or project team.

Recommended Response (From Task Group): Thank you for your comment. Your comment has been rejected for the following reason: The Consensus Body prefers the option presented in your comment 16 – 2.

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

VOTE: The Motion carries with 23 in favor, none opposed, and none abstained.

Opposed: None.

Abstained: None.

16-3. Substantive. 11.5.2.2 or Moeller1 or 11.5.2.4 of Moeller2:

Comment: Verification of Commissioning of Sound Masking System

- The system is tested in the unoccupied but occupancy-ready facility using a calibrated ANSI Type 1 analyzer and results are reported in writing, including:
o Documentation of the test procedure and locations

o Minimum 15-second Leq results for each 1000 sqft in open areas

o Minimum 15-second Leq results for each closed room

Explanation for deviations exceeding specified tolerances

Reason: - In order to ensure that projects are not being rewarded for implementing ineffective masking systems, verification of commissioned results is essential.

- There is no existing standard to reference which outlines an acceptable testing and verification process. Thus, this credit itself must establish a clear and legitimate process.

- This section outlines the equipment, procedure, and reporting required to validate that the masking system conforms to the specifications and tolerances identified in the Green Globes credit.

- The verification process should be awarded a second point, which we believe is consistent with other credits.

- Moeller3 includes the verification process within the body of the credit, either Moeller1 or Moeller2. If it is more correctly located in the commissioning document, the please refer to Moeller4.

Recommended Response (From Task Group): The task group does not feel comfortable providing a response prior to Consensus Body discussion of the comment.

Discussion took place before the Motion:

- It was clarified that sound masking is not currently included in the Commissioning Section.

MOTION: The Motion was made and seconded to refer to project Management for consideration in the Commissioning Section.

Discussion took place on the Motion:

- It was clarified that Sound Masking can be commissioned when no one is occupying the space.
- It was stated that there will still need to be a third-party entity verifying the commissioning.
- It was stated that every time something is added to the Standard, the points need to be devalued from other categories which requires a judgement call of weighing factors and devaluing other criteria. The speaker is against the Motion.
- It was clarified that this will be another item added to a menu of options, so devaluing of other criteria isn't necessary in this instance.

VOTE: The Motion carried with 18 in favor, 3 opposed, and 1 abstained.

Opposed: Don Horn, Mike Lehman, Susan Gitlin

Abstained: Allan Bilka

Mike Lehman resumed Chair at 11:19 AM CT.

Energy:

Presented by Chair David Eldridge

New Business

Recommendation: Replace the existing definition of Renewable Energy Certificates as follows:

Renewable Energy Certificates (RECs): Renewable energy certificates (RECs), also known as renewable energy credits, green certificates, green tags, or tradable renewable certificates, represent the environmental attributes of the power produced from renewable energy projects and are sold separate from commodity electricity. Customers can buy green certificates whether or not they have access to green power through their local utility or a competitive electricity marketer and they can purchase RECs without having to switch electricity suppliers.

Source: <http://apps3.eere.energy.gov/greenpower/markets/certificates.shtml?page=1>

US Department of Energy Green Power Markets

MOTION: The Motion was made and seconded to change the definition for Renewable Energy Certificates (RECs) to the substituted definition.

Discussion took place on the Motion:

- It was clarified that this definition came from the Subcommittee Chair and Vice Chair and that the Subcommittee has not seen this definition nor discussed it. This is new business.

MOTION TO REFER: The Motion was made and seconded to send this to the Energy Subcommittee for a vote.

Discussion took place on the Motion:

- It was stated that this is a highly debated issue and the speaker was in favor of the Motion to Refer. It was stated that the Subcommittee should consider the replacement definition. Many spoke against the current definition and felt that expert opinions were needed to redraft the definition.
- It was clarified that similar discussions have occurred in the Subcommittee, which will be taken into consideration if this is discussed.

VOTE: The Motion to Refer carried with 23 in favor, none opposed, and none abstained.

Opposed: None.

Abstained: None.

Site:

Presented by Subcommittee Chair Gregg Bergmiller

New Business:

The Site Subcommittee Recommends the inclusion of the following definitions:

Permeable pavements: infiltrate, treat, and/or store rainwater where it falls. They can be made of pervious concrete, porous asphalt, or permeable interlocking pavers.

Porous asphalt pavements: allows some or all water to penetrate the asphalt assembly.

Pervious concrete: allows some or all water to penetrate the concrete assembly

Subcommittee Vote: 5 in favor, 2 opposed, and 2 abstained

MOTION: The Motion was made and seconded to accept the Subcommittee's recommendation.

Discussion took place on the Motion:

- It was clarified that these definitions came from the asphalt and concrete industry.

VOTE: The motion carries with 22 in favor, none opposed, and 1 abstained.

Opposed: None.

Abstained: Susan Gitlin

The Site Subcommittee also recommends the inclusion of a definition for **multi-use path**. The language for this definition is still PENDING

MOTION: The Motion was made and seconded to accept the Subcommittee's recommendation.

Discussion took place on the Motion:

- Concern was raised about accepting the inclusion of a definition that hasn't be defined yet.

MOTION TO REFER: The Motion was made and seconded to send to subcommittee for further development.

VOTE: The Motion carried with 23 in favor, none opposed, and none abstained.

Opposed: None.

Abstained: None.

Whole Document Comment:

Presented by Consensus Body Chair Mike Lehman.

8 – 30. Substantive. Full Document:

Comment: There are a number of instances whereby the credit value assignments in the right column are relative to a percentage range of compliance (i.e. Section 10.4.1.1 where ten points are earned for 28% or greater, nine points are earned for 26% to 27%, etc). The ranges as presented include gap values that otherwise fall between the credit values. In the example noted above, what credit is assignable if the calculated value is 27.5%? Does the practitioner seek the higher credit because of rounding or must they adhere to the highest tier they reached?

Reason: In my opinion, a single sentence clarifying this condition located in a footnote or endnote would resolve the issue and make the GBI's intentions clear. A better solution is the format utilized in Section 10.6.1.4 wherein the ranges are written with lower and upper limits defined by < and > symbols. An even better solution is the format utilized in Section 10.7.1.1 where it simply says a minimum of a designated percentage. If a consistent format can be used throughout, the Standard will benefit in terms of usability immensely.

Recommended Response (From Chairs): Thank you for your comment. Your comment has been accepted. The Consensus Body will create a consistent method for addressing gaps in number ranges and apply it throughout the Standard.

Vote: 4 in favor, none opposed, none abstained

Note: Some Chairs thought it would be best to address this on a case by case basis, others preferred to take to the Consensus Body and ask for the inclusion of a note in the forward indicating how to round in the cases where there are gaps between whole numbers in the number ranges.

MOTION: The Motion was made and seconded to use less than/equal to, and greater than/equal to symbols (\leq , \geq) to ensure there are no gaps in ranges. (e.g., $\geq 25\%$ and $< 50\%$: $\geq 50\%$)

Discussion took place on the Motion:

VOTE: The Motion carried with 20 in favor, 1 opposed, and 2 abstained.

Opposed: Kent Sovocool

Abstained: Paul Bertram, Karen Joslin

22 – 50. Substantive. 12.

Comment: Reorder ANSI references as appropriate.

Reason: ANSI standards should be listed under the organization that created the standard. For many standards ANSI is a partner in as much as the organization followed an ANSI process to create the standard but the correct reference is to list it under the developing organization. For example: ANSI/ASHRAE; ANSI/BIFMA

Recommended Response (From Executive Session): Thank you for your comment. Your comment has been accepted and the changes will be implemented in the draft Standard.

Vote: 7 in favor, none opposed, none abstained.

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

VOTE: The Motion carried with 23 in favor, none opposed, and none abstained.

Opposed: None.

Abstained: None.

8 – 18. General. Full Document.

Comment: Sporadically throughout the Standard, a website is included among the Information Reference materials. Insofar as web addresses are subject to change without notice, consider omitting them from the document.

Reason: If a web address cannot be relied upon to be maintained in perpetuity or at least until such time that the next version of this Standard is issued and approved, it stands to undermine a practitioner's ability to use the Standard as intended.

Recommended Response: (From Executive Session): Thank you for your comment. Your comment has been accepted with modification. No link will be included in the criterion language and will be

moved to informational reference(s). A date accessed will be added for each reference. These references will be updated as needed in continuous maintenance.

Vote: 7 in favor, none opposed, none abstained.

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

Discussion took place on the Motion:

- The Consensus Body was reminded that there should be a Quality Control measure to ensure links are accurate. Staff verified links are checked before publishing drafts for public comments but will start adding the date last accessed as a best practice.

VOTE: The Motion carried with 23 in favor, none opposed, and none abstained.

Opposed: None.

Abstained: None.

New Business Not on the Agenda

There was no New Business not on the Agenda.

Review Schedule:

- Staff stated that there will be meetings scheduled for all Subcommittees to address the Points discussion and any remaining comments sent back.
- Staff stated that the Next Consensus Body meeting will likely be July.
- Next Letter Ballot isn't expected until the next draft is out for Public Comment.

A Consensus Body Member requested that the Body receive a working draft of meeting minutes.

A request was made to include thank you to Emily Randolph for running this in-person meeting in the minutes. None opposed or abstained.

Lehman thanked all the Consensus Body members, observers, and our hosts at AISC, and staff for their time and hard work.

The Motion was made, seconded, and carried to adjourn the meeting.

Meeting ended at 11:54PM CT---

