



Meeting Book

NGA Core Purpose

NGA is the authority and resource for its members and the industry to grow successful businesses and to champion the benefits of glazing and glass building products.

NGA Vision Statement

We envision a future in which glass is the material of choice to enhance spaces where people live, play, learn and work.

NGA Goals

Educate: Drive excellence, safety and results through education and training.

Promotion: Elevate the image of glass as a safe, healthy, sustainable and inspiring building product, and advance the industry as a viable, thriving and exciting career path.

Advocate: Be a strong advocate to defend and promote the glass industry.

Grow: Build NGA's membership to develop influence, impact and results.



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Wi-Fi

Network Name	NGA
Password	GCC2020

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By registering, participating, attending, or speaking at the NGA Annual Conference, I agree that neither I nor my company/employer will transmit information or materials received at the NGA Annual Conference to other companies for their commercial use or to other associations with competing interests to NGA.

<p>Task Group Room: La Jolla Shore 8:00 am – 4:00 pm Monday - Wednesday</p>
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Annual Conference 2020 Schedule of Events

Hilton La Jolla Torrey Pines | La Jolla, CA

Sessions are open to all attendees unless otherwise noted.

Monday, January 13, 2020

Meeting Room

9:00 am – 5:00 pm	Registration	Scripps Hall
12:30 pm – 1:30 pm	Lunch & New Professionals Beer Break	Scripps Ballroom
1:45 pm – 2:45 pm	Forming Committee Update <i>Flat Glass EPD and Flat Glass PCR – Urmilla Sowell, NGA</i> <i>Shattering the Limitations of Glass Recycling - Patrick Elmore, Infinite Recycled Technologies</i> <i>Recyclability Industry Survey Results – Urmilla Sowell, NGA</i>	Grande Ballroom D-E
3:00 pm – 3:45 pm	Advocacy Committee Meeting <i>[members and invited guests only]</i>	Grande Ballroom D-E
3:45 pm – 5:15 pm	Presentation: Building Better for Birds <i>featuring Dr. Christine Sheppard, American Bird Conservatory; Michael Mesure, FLAP Canada; and, Dr. Daniel Klem, Muhlenberg College</i>	Grande Ballroom D-E
6:00 pm – 7:00 pm	Welcome Reception	Ballroom Terrace/Foyer

Tuesday, January 14, 2020

8:00 am – 5:00 pm	Registration	Scripps Hall
8:30 am – 9:30 am	Breakfast & Presentation <i>NGA & Your Member Experience – Nicole Harris, NGA</i>	Scripps Ballroom
9:30 am – 12:00 pm	Fabricating Committee Meeting <i>Decorative Mirror Energy</i>	Grande Ballroom D-E
12:00 pm – 1:00 pm	Lunch & Presentation: Economic Update <i>Taylor St. Germain, ITR Economics</i>	Scripps Ballroom
1:00 pm – 5:00 pm	Fabricating Committee Meeting, cont. <i>Where's My Glass Rack presentation – Tim Watson, CEO Smart Logistics</i> <i>Industry Collaboration Updates – Urmilla Sowell, NGA</i> <i>Insulating</i>	Grande Ballroom D-E
6:30 pm – 8:30 pm	Volunteer Celebration Dinner	Parterre Gardens & Ballroom Terrace

Wednesday, January 15, 2020

7:00 am – 8:00 am	5th Annual 5k Fun Run/Walk	Hotel Lobby
8:00 am – 4:30 pm	Registration	Scripps Hall
8:30 am – 9:30 am	Breakfast & Presentation <i>Your Future Targets - Tom Culp, Steve Selkowitz and Thom Zarembo</i>	Scripps Ballroom
9:30 am – 12:00 pm	Fabricating Committee Meeting, cont. <i>Laminating Protective Glazing Fire-Rated Glazing</i>	Grande Ballroom D-E
12:00 pm – 1:00 pm	Lunch & Presentation: NGA Advocacy & Technical Update <i>featuring Tom Culp, Urmilla Sowell, Karen Wegert and Thom Zarembo</i>	Scripps Ballroom
1:00 pm – 4:30 pm	Fabricating Committee Meeting, cont. <i>Tempering Education Advisors</i>	Grande Ballroom D-E

THANK YOU TO OUR SPONSORS



Cornerstone Partner

--



Foundation Partners

--



Economic Speaker



WIFI



Lunch

--



Welcome Reception

--



New Professional Refreshment Break



Refreshment Breaks



--



Bird-Friendly Speakers

--



Fun Run/Walk Sponsors

ATTENDEES

3M

Jennifer Daly

4JET Americas

Rolf va de Velde

A+W Software

Josh Rudd

John Staiano

Billco Manufacturing*

Steve Rodgers

Bovone North America, Inc

Massimo Arata

Douglas Mangus

Brin Glass Company

Bill Sullivan

C.R. Laurence Co., Inc.

Danny Donahue

Jesus Gonzalez

Mark Suehiro

Ronald Wooten

Consolidated Glass Holdings

Tracy Rogers

Cooltemper USA

Mike Shelton

Dip-Tech Inc., a Ferro Company

Gady Ginzburg

John Hickey

Dow*

Stanley Yee

Eastman /Saflex*

Julia Schimmelpenninck >

Jeff Skaza

Fenestration Fundamentals LLC

Mike Burk

FeneTech Inc

Ron Crowl#

Fenzi North America

James Wright

ATTENDEES

Ferro Corporation

Carolyn Margosian

GDS Estimating

Scott Millard

GED Integrated Solutions

John Moore

GGI

John Bush

Gus Trupiano

Glass and Mirror Craft

Steve Gizicki

Tony Moore

Glass Coatings & Concepts*

Matt Hanna

Tim McGee

Randy Reynolds

Goldray Industries Ltd. *

Michael Saroka

Guardian Glass LLC

Dave Evans >

Helima Helvetion Intl.

Anthony McCall

Herzog Industries, LLC

Joe Kaiser

Hydro Extruded Solutions

Barb Johnson

Paul Walker

ICD High Performance Coatings

Casey Anderson

Jeff Nicholson

Kris Vockler

DJ Widmer

Infinite Recycled Technologies

Patrick Elmore+

Paul Schmitt

Jeremiah Watson

International Union of Painters

and Allied Trades

Tim Stricker

ATTENDEES

Kawneer Company

Chris Giovannelli

Kuraray America, Inc. *

Vaughn Schauss >

Larson Engineering

Rachel Schulz

Lippert Components

Tim Widner

Mainstreet Computers, Inc.

Brad Rhoades

Kristyn Rhoades

Mapes Architectural Panels*

Luke Prussa

Mappi America*

Nancy Mammaro

Ermanno Petitti

McGrory Glass

Ron Gerhardt

Northwestern Glass Fab*

Eric Fortin

Oldcastle BuildingEnvelope

Melissa Szotkowski

Rick Wright >

Paragon Tempered Glass

Barry DeLong

Permasteelisa North America

Steve Dean^

Pilkington|NSG*

David Duly

Kayla Natividad

SAGE Electrochromics, Inc.

Maure Creager

Salem Distributing Company

Daniel Reinhart

Michael Willard

Schilling Inc.

Doug Schilling#

ATTENDEES

Sika Corp.
 Florian Doebl

SMART Logistics
 Tim Watson+

Softsolution North America Inc.
 Nathan Huffman

Super Sky Products Enterprises
 Brian Thomas

SWM International
 Jeffrey Kirk
 Tom Niziolek

Technical Glass Products
 Devin Bowman+

Technoform
 Alexandra Blakeslee
 Helen Sanders >
 Ron Sucik

Tremco
 Dave Horschig

Tristar Glass, Inc. *
 Robert Carlson

Trulite Glass and Aluminum
 Solutions, LLC
 Jeffery Haberer >

Ubiquitous Energy
 Miles Barr

Vesuvius
 Marcus Bancroft
 Scott Talbott

View
 Thomas Gubiotti

Viracon
 Pete Anderson
 Aaron Thompson^

Vitro Architectural Glass*
 Paul Bush^
 Steve Marino

ATTENDEES

Vitrum Glass Group
 Thomas Martini

Walker Glass Company Ltd. *
 Charles Alexander
 Sylvain Denis >

Woodbridge Glass, Inc.
 Matt Kamper^

SPEAKERS NOT OTHERWISE LISTED

American Bird Conservancy
 Christine Sheppard

FLAP Canada
 Michael Measure

Lawrence Berkeley National
 Laboratory
 Steve Selkowitz

Muhlenberg College
 Daniel Klem

INDUSTRY ORGANIZATIONS

Fenetrations and Glazing Industry
 Alliance (FGIA)
 Margaret Webb

SGCC/IGCC/AMS
 John Kent

PRESS

Glass Magazine

Key Media & Research (KMR)
 Ellen Rogers

* Sponsors
 + Speakers
 # Board Members
 ^ Committee Chairs/Vice Chairs
 > Technical Liaisons

Know Us When You See Us

Advocacy Committee

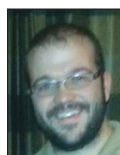


Paul Bush
Vitro Architectural Glass
Chair

Forming Committee



Mark Cody
AGC Glass Company
Chair



Jon Griggs
Guardian Glass
Vice Chair

Fabricating Committee



Aaron Thompson
Viracon
Chair



Sylvain Denis
Walker Glass
Decorative Technical Liaison



Dave Evans
Guardian Glass
Mirror Technical Liaison



Jeff Haberer
Trulite
Insulating Technical Liaison



Kevin Norcross
Vetrotech Saint-Gobain
Fire-Rated Glazing Technical Liaison



Helen Sanders
Technoform
Energy Technical Liaison



Vaughn Schauss
Kuraray
Protective Glazing Technical Liaison



Julie Schimmelpenningh
Eastman Chemical Co.
Laminating Technical Liaison



Rick Wright
Oldcastle BuildingEnvelope
Tempering Technical Liaison

Installing Committee



Matt Kamper
Woodbridge Glass
Chair



Steven Dean
Permasteelisa
Vice Chair

Know Us When You See Us



Chris Bole
Pikes Peak Glass Inc.
Chair



Cathie Saroka
Goldray Glass
Chair-Elect



Doug Schilling
Schilling Graphics Inc.
Treasurer



Angelo Rivera
Faour Glass Technologies
Immediate Past Chair



Mark Chapman
Chapman Windows, Doors and Siding



Ron Crowl
FeneTech Inc.



Brian Hale
Hale Glass



Tim Kelley
TriStar Glass Inc.



Rick Locke
Windows, Doors & More Inc.



Guy Selinske
American Glass & Mirror



Jim Stathopoulos
Ajay Glass Co.



Mark Twente
AGC Glass Company North America



Nicole Harris
President & CEO

Know Us When You See Us

Consultants



Tom Culp
Energy Code Consultant



Thom Zaremba
Fire, Safety and Structural Code Consultant

Staff



Jenni Chase
Content Director



Andrew Haring
Vice President of Business Development



Nicole Harris
President & CEO



Danitza Medrano
Events Coordinator



Sara Neiswanger
Senior Manager, Industry Engagement



Wendy Rochelle
Meeting Planner



Urmilla Sowell
Advocacy and Technical Services Director



Karen Wegert
Associate Director, Technical Services



ARTICLE XV ANTI-TRUST COMPLIANCE

SECTION 1. POLICY

It is the undeviating policy of the Association to comply strictly with the letter and spirit of all federal, state and applicable international trade regulations and antitrust laws. Any activities of the Association or Association-related actions of its staff, members, officers, directors or chapter officials which violate these regulations and laws are detrimental to the interests of the Association and are unequivocally contrary to Association policy.

SECTION 2. IMPLEMENTATION

Implementation of the antitrust compliance policy of the Association shall include, but shall not be limited to, the following:

2.1 Association membership, directors and committee/alliance/division meetings shall be conducted pursuant to agendas distributed in advance to attendees; discussions shall be limited to agenda items; there shall be no substantive discussions of Association matters other than at membership, directors and committee/alliance/division meetings; minutes shall be distributed to attendees promptly.

2.2 All Association activities or discussions shall be avoided which might be construed as tending to: (1) raise, lower, or stabilize prices; (2) regulate production; (3) allocate markets; (4) encourage boycotts; (5) foster unfair trade practices; (6) assist monopolization; or in any way violate federal, state or applicable international trade regulations and antitrust laws.

2.3 No individual other than the Chair of the Board and Chief Executive Officer--whether staff, member, officer, director or committee/alliance/division official--is authorized to communicate on behalf of the Association to any person or firm outside the Association except with the explicit, unequivocal approval of the Chair of the Board or President. No such individual may bind or commit the Association to any offer, contract, policy, program, position or decision without that approval. And no such individual may hold out himself or herself, or willingly appear to do so, as representing the Association without that approval.

2.4 NGA legal counsel shall attend all NGA Board and membership meetings, either in person or via teleconference. Attendance of counsel at other meetings shall be at the discretion of the NGA Chair of the Board.

2.5 Association staff, members, officers, directors or committee/alliance/division officials who participate in conduct which the Board of Directors, by a two-thirds (2/3) majority vote, determines to be contrary to the Association anti-trust compliance policy shall be subject to disciplinary measures up to, and including, termination.



NATIONAL GLASS ASSOCIATION

CONFLICTS OF INTEREST POLICY

This Conflicts of Interest Policy applies to all National Glass Association (NGA) staff, members, officers, directors, chapter officials, and all members of a committee, division or task force of NGA as designated by the Board of Directors (“interested persons”).

As an interested person, I recognize that I owe duties of care and loyalty to NGA. One aspect of fulfilling those duties is to avoid conflicts of interest in which my allegiance might be split between my position with NGA and some other personal, professional, or volunteer position or responsibility. To help avoid conflicts, I will disclose other situations or areas in which it might even appear that I have interests conflicting with those of NGA. I invite any further review by the NGA of any aspects of these situations or areas which might be considered appropriate.

Using the NGA Conflicts of Interest Disclosure Form provided by NGA staff, I will disclose potential conflicts to the Chair of the Board (or in the case of the Chair, to the Treasurer) and/or to the members of any committees, divisions or task forces of NGA as designated by the Board annually and as they arise. For each interest disclosed, the Chair (or Treasurer) will determine whether to: (a) take no action; (b) assure full disclosure to the Board of Directors and/or the relevant committee, division, or task force; (c) ask for recusal from participation in related discussions or decisions; or (d) ask for voluntary resignation from the Board, or, potentially, removal in accordance with NGA’s removal procedures or voluntary resignation from the relevant committee, division or task force. NGA’s CEO will also monitor proposed and ongoing transactions for potential conflicts of interest.

Disclosure of interests:

Personal, professional, or volunteer positions or responsibilities, including those of mine and/or my family members, that might give rise to conflicts (examples include serving in a position of leadership for another association in the glass or residential window and door industry, or performing work for the NGA or another association in the glass or residential window and door industry).

PROJECT IDEA/CREATION FORM

Title:
Submitter:
Submittal Date:
Submitter Contact Info (phone and email):

TASK GROUP MEMBERS:

Name	Company	Email

BASIC INFORMATION:	Describe
Project Description	
Does this require immediate action? If yes, please explain.	

AUDIENCE:	Describe
Who is the primary audience for the finished work, and why?	Please mark one primary audience: <ul style="list-style-type: none"> <input type="checkbox"/> fabricators and manufacturers <input type="checkbox"/> suppliers <input type="checkbox"/> contract glaziers <input type="checkbox"/> full-service glass companies <input type="checkbox"/> specifiers <input type="checkbox"/> architects <input type="checkbox"/> building owners <input type="checkbox"/> other: _____

SCOPE:	Describe
Identify the breadth/depth of the project and any known limitations/boundaries that need to be considered to provide the target deliverable.	
What is the recommended format of providing the work product to the target audience?	Please mark one primary format: <ul style="list-style-type: none"> <input type="checkbox"/> GIB (Glass Informational Bulletin) <input type="checkbox"/> GTP (Glass Technical Paper) <input type="checkbox"/> Standard <input type="checkbox"/> Manual <input type="checkbox"/> Magazine article <input type="checkbox"/> MyGlassClass.com course <input type="checkbox"/> Thirsty Thursday webinar <input type="checkbox"/> AIA presentation <input type="checkbox"/> Other: _____

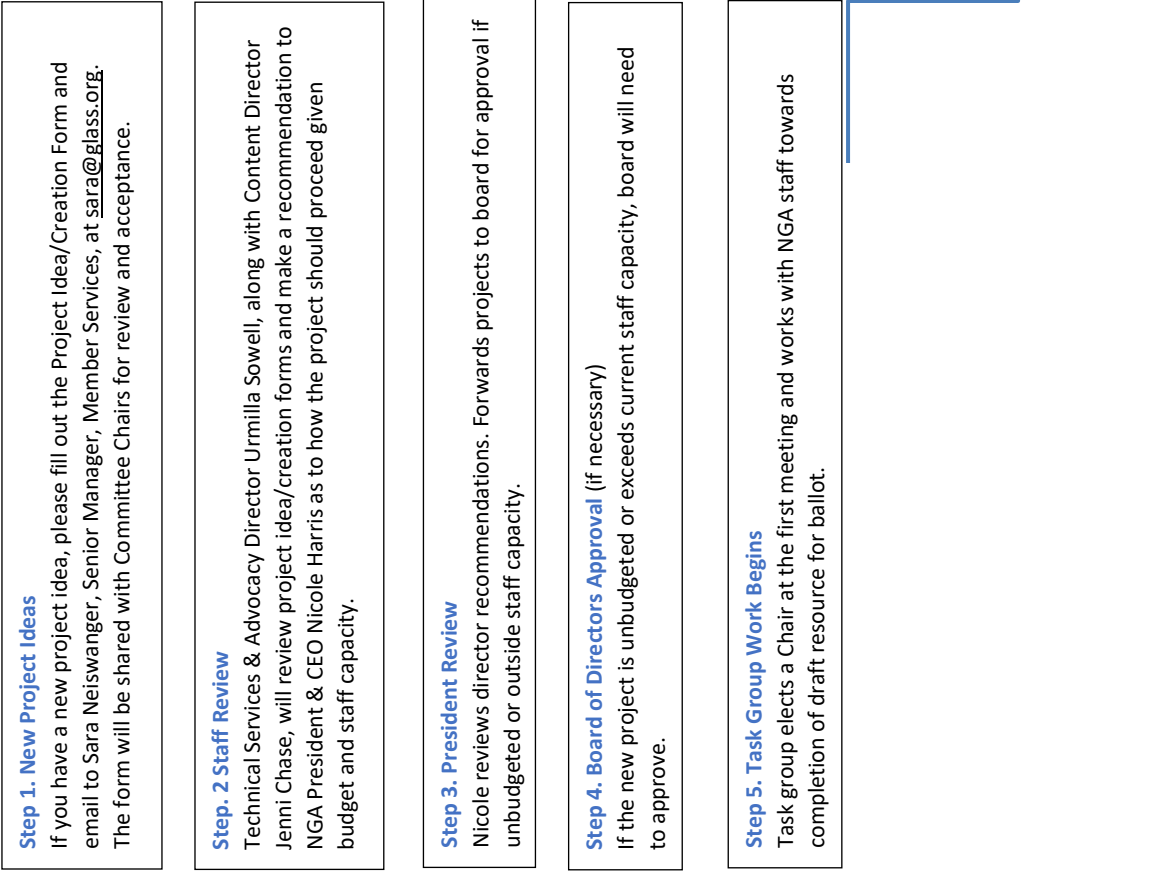
PURPOSE & OBJECTIVES:	Describe
What knowledge or skill gap will the work product close?	

TIMELINE:	Describe
Identify timeline, start to finish	
Target Date to First Ballot (if applicable)	
Target Date for Project Completion*	*understanding a document goes through three levels of balloting for 21-days each, in addition to time to address any comments at each level.

Attachment (if applicable):

FOR INTERNAL USE ONLY [STAFF TO COMPLETE]

Related Task Groups	
Non-technical explanation	
Does the project or topic meet the association's strategic focus (annual, 3-year plan)?	
Budget	
After publication, packaging and promotion plan	Additional formats: <ul style="list-style-type: none"> <input type="checkbox"/> news release <input type="checkbox"/> newsletter article <input type="checkbox"/> house ad <input type="checkbox"/> Glass Magazine <input type="checkbox"/> website promotion <input type="checkbox"/> education/event topic <input type="checkbox"/> MyGlassClass.com course <input type="checkbox"/> Express Learning <input type="checkbox"/> webinar <input type="checkbox"/> AIA, CSI, other



MEMO

May 10, 2019

TO: NGA Committee Chairs, Vice Chairs and Liaisons

FR: Integration Task Force: Julia Schimmelpenninck, Stanley Yee, Michael Albert, Ren Bartoe, Angelo Rivera, Nicole Harris, Urmilla Sowell

RE: Publication Development Process

The Integration Task Force (ITF) with staff has been reviewing the method and types of technical publications the Association produces through lens of both process and our [strategic goals](#).

Currently, we produce three types of technical publications: glass informational bulletins (GIBs), white papers and manuals. The distinction between GIBs and white papers has become hazy over recent years. Also, the length of GIBs has continued to grow which lengthens the time it takes to write and publish technical documents for distribution to members, the industry and our stakeholders, including architects and building owners.

Below is a summary of proposed changes for your perspective and input. Please also refer to the Publication Matrix sheet describing the scope, format and development process of each resource type.

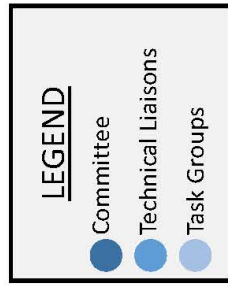
1. **Glass Informational Bulletins (GIBs)** were first intended to provide a high-level summary of a single topic with the goal of making industry aware of an important issue without delving into deep technical details needed by experts

The ITF believes it is time to rekindle this original GANA approach and instruct task group members to draft one-two page (950-1,270 word) summaries on single topics, and then write the detailed document which would be separately identified as a Glass Technical Paper
2. **Glass Technical Papers (GTPs)** would take the format of current-day GIBs, 2-10 (950 – 5,000 word) pages in length allowing for greater elaboration and detail on a topic introduced by the GIB
3. **Standards** represent select resources to be developed specifically for future ASTM standard adoption
 - a. Composition begins within the ASTM template
 - b. As long-term resource standards documents have no page length restriction
4. **Manuals** often originate from an outline on a broad-reaching topic and contain multiple sections; existing GIBs are reviewed for citation or direct incorporation into applicable sections

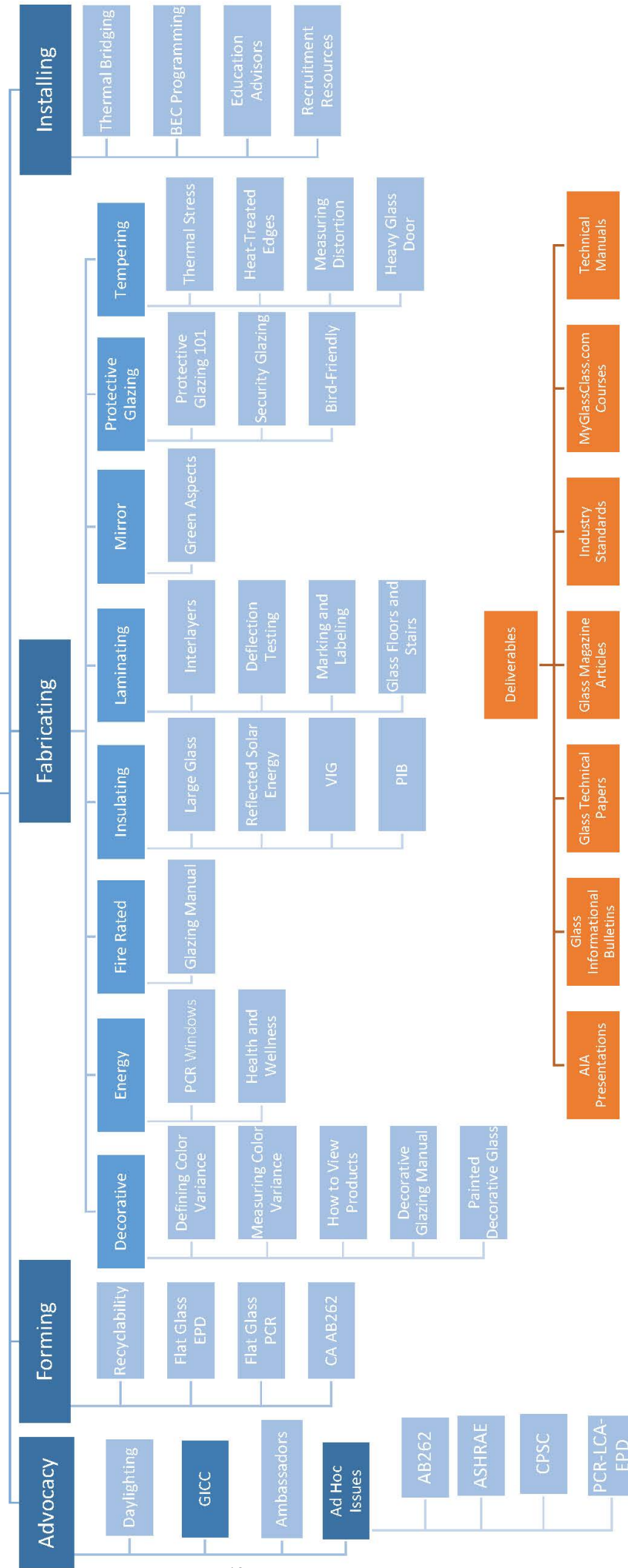
This approach has several benefits:

- Member companies would see the results of volunteer efforts sooner and with higher visibility: Glass Magazine would publish the GIB summary as soon as it is balloted.
- Current and new/potential readers learn about an issue quickly with the option to pursue deeper research by reading the complete Technical Paper.
- Strengthens the Association as the technical authority with more frequent new releases and repeat exposure (GIB published and promoted; Technical Paper published and promoted)
- Enables the Association to publish new resources more quickly and showcase the volunteer effort.
- Creates a new member benefit driver by charging non-members to download the more-detailed Technical Paper (GANA did at one time make GIBs a members-only benefit).

We look forward to discussing this with you.



National Glass Association Board of Directors



NGA's four committees--Advocacy, Forming, Fabricating and Installing--share voting protocol parameters to achieve consensus, with the goal of moving forward with the association's annual and long-term strategic goals and objectives. The following diagram outlines the protocol parameters across the committees, noting differences among them.

Committees are made up of committed member and industry volunteers who agree to abide by this protocol to maintain and promote effective action.

- Members may select to be a corresponding member – no vote, but information is distributed to them for selected committees.
- Member companies must **ACTIVELY** return ballots on time.
- All ballots are open for 21 business days and close at 5 pm eastern time on closing day.
- Three consecutively missed ballots per committee results in loss of voting privilege on that committee for three months.
- NGA to set up system to inform of ballot close 10 business days & 1 business day prior to due date; reminders sent only to those remiss.
- Request for vote to be returned to a member will be addressed by Committee Chair with approval by BOD and must be submitted in writing. A new voting member must be named.
- Repealed vote to be treated as corresponding member; will receive all notices and information from committee.
- All committee ballots approved by a simple majority (51%).
- All ballots must have a minimum 66% response rate of the voting members to be valid.
- Votes to be cast as: Approve, Approve with Comment, Disapprove with Comment & Abstain.
- Abstentions are removed from count for simple majority.
- Negative votes must have comments. Comments must contain the following information to be considered:
 - Title of document being commented on
 - Direct and clear reference of material being rejected (paragraph, line, table number, figure number etc.)
 - Reason for rejection
 - Suggested language or changes required to resolve negative
 - All properly submitted Disapproving comments from voting members must be considered. Others (non-voting; improper format) may be taken up as new business or found non-persuasive at the discretion of the Committee Chair.

FABRICATING COMMITTEE

- NGA members have ONE vote per company; voting member listed on glass.org.
- Each company shall have a primary and alternate voting member assigned.

INSTALLING COMMITTEE

- NGA members have ONE vote per company; voting member listed on glass.org.
- Members must **ACTIVELY** participate in Committee meetings (minimum of two per year). Three consecutively missed meetings results in loss of voting privilege.

ADVOCACY

- Voting positions determined based on input from members, BOD, and consultation with experts to guard against special interests and minimal input decisions.
 - GICC - Regulatory (see GICC Protocol) - open to all *paying members* of GICC.

ADVOCACY COMMITTEE AGENDA

January 13 | 3:45 pm – 5:15 pm

Grand Ballroom D-E



Chair: Paul Bush

Vitro Architectural Glass

pbush@vitro.com

NGA Antitrust Policy

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Please refer to NGA Bylaws for SECTION 2. IMPLEMENTATION of the antitrust compliance policy of the Association.

Agenda Items

1. Call to Order - *Chair Paul Bush, Vitro Architectural Glass*
2. Attendee Introductions
3. Review of Anti-Trust Statement and Conflict of Interest Policies
4. Appointment of Recording Secretary – *Sara Neiswanger, Senior Manager, Industry Engagement*
5. Minutes of the Previous Meeting

6. *Committee Mission Statement*

The NGA Advocacy Committee advocates on behalf of the glass and glazing industry to:

- Support the Glazing Industry Code Committee
- Educate stakeholders and consumers on the benefits of glass in the built environment
- Promote and protect the interests of the glass and glazing industry.

7. Business

- a. Legislative Ambassador Project / Strike Team - *Karen Wegert, NGA*
- b. Discussion and Reports (*if needed*)
- c. New Business
 - i. Code official glass education
 1. Guide to the IBC
 - ii. Installing Committee collaboration – *Steve Dean, Permasteelisa*
- d. Panel Presentation: *Building Better for Birds*

8. Next Meetings: BEC Conference | Mar 1-3, 2020 | JW Marriott, Nashville, TN

NGA Glass Conference: Chicago | July 28-30, 2020 | Renaissance Chicago North Shore

Glazing Executives Forum | Sep 15, 2020 | Las Vegas Convention Center

GlassBuild America | Sep 15-17, 2020 | Las Vegas Convention Center

NGA Glass Conference: Clearwater Beach | Jan 18-20, 2021 | Opal Sands Resort

9. Adjournment

**NGA is an approved AIA Provider and, thanks to the involvement of its volunteer members, has nine (9) approved presentations as part of its resource library. Members may use these presentations as a resource when reaching out to architects and other interested parties. An individual must simply become an approved presenter of these presentations of their choice and the materials to conduct a presentation from start to finish will be provided to you. Upon completion of a presentation, simply return the sign-in sheet to sara@glass.org. Credit will be recorded with AIA and certificates will be provided, if requested. [Click here](#) to download the AIA speaker agreement.*

TASK GROUP ROOM : LA JOLLA SHORE

8:00 am – 4:00 pm

Monday - Wednesday



NETWORK: NGA
PASSWORD: GCC2020

Advocacy Committee Meeting

August 13, 2019

Call to Order

The meeting was called to order by Paul Bush, Vitro Architectural Glass, at 10:15 am ET. The meeting was adjourned at 12:05 pm ET.

Administrative Activities

Introductions were made.

Sara Neiswanger, NGA Senior Manager, Industry Engagement acted as Recording Secretary.

Anti-Trust Statement

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Please refer to NGA Bylaws for SECTION 2. IMPLEMENTATION of the antitrust compliance policy of the Association.

Business Items

Minutes of Previous Meeting

A motion was made by Stanley Yee and seconded by Jeff Haberer to approve the minutes as provided. Motion carried.

Committee Mission Statement

The NGA Advocacy Committee advocates on behalf of the glass and glazing industry to:

- Support the GICC
- Educate stakeholders and consumers on the benefits of glass in the built environment
- Promote and protect the interests of the glass and glazing industry

Task Groups

How to Incorporate Health & Wellness Benefits in the IBC – Helen Sanders, Technoform

- A proposal failed in the last round of code hearings in support of safety and health
- European code language and that from New Zealand is being reviewed for potential incorporation
- The existing GIB on daylighting is being formatted into an abbreviated summary that can be shared with code officials at the September ICC hearings
- A list of potential partners and stakeholders is being developed in effort to approach the ICC in unification
- Also reference the May 2019 Thirsty Thursday webinar recording on the same subject
- Action: Tom Culp will share a similar white paper written by the Aluminum Extrusion Council
- Task Group: add Jen Daly and Charles Alexander

Discussion and Reports

- How to get ahead of legislation
 - o New York Office of Sustainability, CA Dept of General Services, etc.
- Glazing Industry Code Committee Update
 - o The Group B cycle of structural and energy codes is halfway through its proposal process
 - GICC monitored over 100 proposals in the structural and fire-rated areas
 - o Conflicts in language with the Energy Star standard are being addressed
 - o Opposing a proposal regarding the modulus of rupture required for glass panels used in guard and ballusters.
 - o Much of the language in the Guards section of Chapter 24 was updated to be consistent with the rest of the IBC.
- ASHRAE 90.1-2019 Update
 - o 2019 edition is complete and will be published in early October

- 2021 IECC proposals were approved to align commercial fenestration requirements with 90.1-2019.
- Items still in progress for next edition
 - Thermal bridging
 - Prescriptive requirement for on-site renewable energy
 - Envelope trade-off limits of 'backstops'
 - Against philosophy of integrated design
 - Potential negative impact on window area
- ASHRAE 189.1 and IgCC are merged
 - Tom Culp has been elevated to full committee voting member
 - Proposals being considered for expanded daylighting and proposal for minimum views
- NYC 2050 Green New Deal, in response...
 - For new buildings, promote high performance facades with advanced framing, glazing and shading systems.
 - New existing building requirements will also impact builders when constructing it as a new building
 - For existing buildings, envelope retrofits and new glazing
 - Select states are passing laws based on similar climate change goals

New Business

- Promote glass advocacy issues that are local to events during which NGA can visit with legislators on a relevant topic (i.e. bird-friendly glazing in high migratory areas such as Ohio)
 - A sample quad chart was displayed as a potential vehicle to share key details with local officials and legislators
- NGA Advocacy Database
 - Goal is to build a database of NGA members to advocate for glass and glazing at all legislative and regulatory levels; and, learn how members are currently engaging on advocacy issues
 - 55 member companies were contacted in NY, CA, TX, WA, MN, CO; and British Columbia); 17 responses to date
 - Top concerns: codes, standards, regulations on glass and glazing products; lack of skilled labor
 - Non-responding companies will continue to be pursued
 - NGA will be articulating what exactly is involved in being on a 'strike team'

FABRICATING COMMITTEE AGENDA

January 14 | 9:30 am – 5:00 pm

January 15 | 9:30 am – 4:30 pm



Chair: Aaron Thompson

Viracon

athompson@viracon.com

NGA Antitrust Policy

It is the undeviating policy of the Association to comply strictly with the letter and spirit of all federal, state and applicable international trade regulations and antitrust laws. Any activities of the Association or Association-related actions of its staff, members, officers, directors or chapter officials which violate these regulations and laws are detrimental to the interests of the Association and are unequivocally contrary to Association policy.

Please refer to NGA Bylaws for SECTION 2. IMPLEMENTATION of the antitrust compliance policy of the Association.

Agenda Items

Breakfast & NGA Presentation | 8:30-9:30 am | Scripps Ballroom

Fabricating Committee Meeting | 9:30 am - 12:00 pm | Grand Ballroom D-E

1. Call to Order - *Chair Aaron Thompson, Viracon*
2. Appointment of Recording Secretary – *Sara Neiswanger, Senior Manager, Industry Engagement*
3. Attendee Introductions
 - a. Welcome to new members
4. Review of Anti-Trust Statement and Conflict of Interest Policies
5. Minutes of the Previous Meeting
6. Committee Business
 - a. Decorative - *Sylvain Denis, Walker Glass*
 - i. Best Practices for Installed Painted Decorative Glass – *James Wright, Fenzi NA*
 - ii. How to View Decorative Products in Interior and Exterior Applications – *Michael Saroka, Goldray Industries*
 - i. Decorative Glazing Manual – *Sylvain Denis, Walker Glass*
 - ii. Measuring Color Variance – *Sylvain Denis, Walker Glass*
 - iii. Defining an Acceptable Color Variance – *Sylvain Denis, Walker Glass*
 - iv. SR: Guidelines for Handling and Cleaning Decorative Glass
 - v. SR: Weatherability of Decorative Glass
 - vi. SR: Durability of Decorative Glass
 - vii. SR: Durability & Testing of Interior Mounted Decorative Glass
 - viii. Other New Business
 - b. Mirror - *Dave Evans, Guardian Glass*
 - i. Green Aspects of Mirror – *at ballot*
 - ii. Other New Business

Networking Break: 15 Minutes

TASK GROUP ROOM : LA JOLLA SHORE
8:00 am – 4:00 pm
Monday - Wednesday



NETWORK: NGA
PASSWORD: GCC2020

- c. Energy - *Helen Sanders, Technoform*
 - i. PCR-LCA-EPD update – *Urmilla Sowell, NGA*
 - ii. Health and Wellness Benefits webpage resources review –
<https://www.glass.org/daylighting> – *Helen Sanders, Technoform*
 - iii. ASHRAE vs IECC: Status of code adoptions across the state – *Karen Wegert, NGA*
 - iv. Other New Business

Lunch | Scripps Ballroom
Economic Forecast with Taylor St. Germain, ITR Economics

- d. Industry Collaboration Updates – *Urmilla Sowell, NGA*
- e. Presentation – *Where's my Glass Rack? with Tim Watson CEO, Smart Logistics*
- f. Insulating - *Jeff Haberer, Trulite*
 - i. Large Glass – *Jon Griggs, Guardian Glass*
 - ii. Vacuum Insulating Glazing – *Kayla Natividad, Pilkington NSG*
 - iii. Bent IGUs – *Jeff Haberer, Trulite*
 - iv. Secondary Sealants in IGUs – *Urmilla Sowell, NGA*
 - v. Compatibility Testing of Glazing Materials Related to the Performance of PIB in IGUs (with FGIA) – *Urmilla Sowell, NGA*
 - vi. SR: Guidelines for the Appearance of IGU Edges
 - vii. Other New Business

Adjourn until Wednesday, January 15 at 9:30 am PT

**NGA is an approved AIA Provider and, thanks to the involvement of its volunteer members, has nine (9) approved presentations as part of its resource library. Members may use these presentations as a resource when reaching out to architects and other interested parties. An individual must simply become an approved presenter of these presentations of their choice and the materials to conduct a presentation from start to finish will be provided to you. Upon completion of a presentation, simply return the sign-in sheet to sara@glass.org. Credit will be recorded with AIA and certificates will be provided, if requested. [Click here](#) to download the AIA speaker agreement.*

TASK GROUP ROOM : LA JOLLA SHORE
8:00 am – 4:00 pm
Monday - Wednesday



NETWORK: NGA
PASSWORD: GCC2020

“Your Future Targets” Presentation & Breakfast | 8:30-9:30 am | Scripps Ballroom

Tom Culp, Steve Selkowitz and Thom Zaremba

Fabricating Committee Meeting | 9:30 am - 12:00 pm | Grand Ballroom D-E

2. Call to Order - *Chair Aaron Thompson, Viracon*
3. Appointment of Recording Secretary – *Sara Neiswanger, Senior Manager, Industry Engagement*
4. Review of Anti-Trust Statement and Conflict of Interest Policies
5. Business
 - a. Laminating – *Julia Schimmelpenninck, Eastman Chemical Company*
 - i. Compression of Interlayers HGDDG – *Melissa Szotkowski, Oldcastle BuildingEnvelope®*
 - ii. Laminated Deflection Tables – *Julia Schimmelpenninck, Eastman*
 - iii. Marking and Labeling – *Vaughn Schauss, Kuraray*
 - iv. Glass Floors and Stairs – *Vaughn Schauss, Kuraray*
 - v. SR: Effects of Moisture, Solvents and Other Substances on Laminated Glazing Edges
 - vi. NGA/FGIA laminating pre-qualification task group – *Urmilla Sowell, NGA*
 - vii. Other New Business

Networking Break: 15 Minutes

- b. Protective Glazing – *Vaughn Schauss, Kuraray*
 - i. Protective Glazing 101 AIA presentation – *Vaughn Schauss, Kuraray*
 - ii. Bird Friendly Glass Design Strategies – *Nathalie Thibault, Prelco*
 - iii. Security for Buildings– *Vaughn Schauss, Kuraray*
 - iv. School Security Update – *Thom Zaremba, Roetzel & Andress*
 - v. Other New Business
- c. Fire-Rated Glazing – *Kevin Norcross, Vetrotech Saint-Gobain*
 - i. Presentation: Versatility of Fire-Rated Glazing Products, *Devin Bowman, Allegion*
 - ii. Chicago’s adoption of the IBC- fire rated glass implications – *Thom Zaremba, Roetzel & Andress*
 - iii. ANSI Z97.1 in Canada – *Thom Zaremba, Roetzel & Andress*
 - iv. Glazing Manual fire-rated glazing content update – *Karen Wegert, NGA*
 - v. Other New Business
 1. New Task Group: Non-Fire-Related Benefits of Fire-Rated Glazing

Lunch | Scripps Ballroom

Technical & Codes Update

- d. Tempering – *Rick Wright, Oldcastle BuildingEnvelope®*
 - i. Methods for Measuring Distortion
 - ii. Edge Grinding – *Bill Lingnell, Lingnell Consulting*
 - iii. Heavy Glass Door Design Guide – *published!*
 - iv. ASTM E1300 ceramic enamel update – *John Smith, GCC*
 - v. ASTM C14 Update – *Rick Wright, Oldcastle BuildingEnvelope®*
 - vi. Other New Business
- di. Fabrication Education Advisor Group – *Jenni Chase, NGA*
- dii. Other Committee Business
 - i. Do’s and Don’ts of Mock-Ups – *Urmilla Sowell, NGA*
 - ii. Frameless Shower Enclosure task group – *Urmilla Sowell, NGA*

TASK GROUP ROOM : LA JOLLA SHORE

8:00 am – 4:00 pm
Monday - Wednesday



NETWORK: NGA
PASSWORD: GCC2020

6. Publications Update

a. Active Ballots – Reference Table

Document	Former Code	New Code
Protective Glazing 101 AIA Presentation		
Performance Improvement in IGUs – new GIB format	New	
Proper Procedures for Cleaning Architectural Glass Products – new GIB format	New	
Thermal Stress in Spandrel – new GIB format	New	
Focused Solar Energy – new GIB format	New	
Installation Techniques Designed to Prolong the Life of Flat Glass Mirrors	MD 03-0811	FB21-09 (2011)

b. Systematic Review Ballot Update

The Systematic Review ballot for Glass Informational Bulletins (GIBs) and other technical resources collects feedback and comments for task group discussion in preparation for the established 5-year review process. GIBs and other technical resources are evaluated, and if necessary, updated, to ensure they reflect industry and market requirements and other changes. If a document receives no updates or comments, it will automatically be republished.

Document	Former Code	New Code
Top 10 Items Commonly Missing from Fenestration Shop Drawings	BEC 01-0314	IN01-06 (2014)
Safety Guidelines for Deglazing Structural Silicone	BEC 04-0314	IN04-14

7. New Business

8. Next Meetings: BEC Conference | Mar 1-3, 2020 | JW Marriott, Nashville, TN

NGA Glass Conference: Chicago | July 28-30, 2020 | Renaissance Chicago North Shore

Glazing Executives Forum | Sep 15, 2020 | Las Vegas Convention Center

GlassBuild America | Sep 15-17, 2020 | Las Vegas Convention Center

NGA Glass Conference: Clearwater Beach | Jan 18-20, 2021 | Opal Sands Resort

9. Adjournment

TASK GROUP ROOM : LA JOLLA SHORE
8:00 am – 4:00 pm
Monday - Wednesday



NETWORK: NGA
PASSWORD: GCC2020

Fabricating Committee Meeting

August 14-15, 2019

Call to Order

The meeting was called to order by Aaron Thompson, Viracon, at 10:45 am ET.

Administrative Activities

Introductions were made.

Sara Neiswanger, NGA Senior Manager Industry Engagement acted as Recording Secretary.

Anti-Trust Statement

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Please refer to NGA Bylaws for SECTION 2. IMPLEMENTATION of the antitrust compliance policy of the Association.

Minutes of August 14, 2019

A motion was made by Stanley Yee and seconded by Mitch Edwards to approve the minutes from 2019 Annual Conference. Motion carried.

Business Items

Education Advisory Task Group

- Task group members will serve in an advisory role in order to address to gaps in education that exist in the fabrication arena.
- Interested members should contact Stephanie Ellis to get involved – sellis@glass.org

Tempering – Rick Wright, Oldcastle BuildingEnvelope

- Point Supported Glass
 - o GIB has passed ballot and being formatted for online publication
- Thermal Stress in Spandrel
 - o GIB has been published. The contents were reviewed in detail with attendees.
- ASTM E1300 Ceramic Enamel Update
 - o Workgroup E06.52.10 WK 65259 has been established to develop a 9-step maximum stress design procedure for ceramic enamel glass under uniform wind load. Michael Morrissey of GCC gave an update on behalf of John Smith of GCC (ASTM WK65259 chair).
- ASTM C14 Update
 - o Rick Wright, Chair of ASTM C14.08, gave an overview of all of the glass related standards being updated including the active task groups which were established on measuring thermal stress and developing an anisotropy test method.
- Heavy Glass Door Design Guide
 - o A summary of compression testing results conducted under the Laminating Subcommittee has been incorporated into the manual
 - o It will undergo a final review within the task group, then be sent to ballot in order to publish by the end of the year – from the original 1999 edition.
- Engineering Standards Manual
 - o Published and available online for purchase

- Edge Grinding next steps
 - o Test control samples to destruction
 - o Evaluating post-finishing of heat-treated glass edges
 - o Task Group: Mitch Edwards, Vaughn Schauss, Jeff Haberer, Kayla Natividad, Bill Lingnell, Rick Wright, Jim Gulnick, Earl Mercado, Tony Moore, Michelle Phan
- Methods for Measuring Distortion GIB
 - o Goal is to address comments and update
 - o Task Group: Rick Wright, Jeff Haberer, Barry DeLong, Steve Marino, Bernie Herron, Jon Griggs, Tony Moore

New Business

- [Frameless] Shower Enclosure Design Guide: thickness, holes, tolerances, hardware
 - o Task Group: Earl Mercado, Rick Wright, Jeff Haberer, Nathalie Thibault
- Collaborative effort with Installing Committee; the item will be added to the its meeting agenda in September
 - o Installation Guide: best practices for installation and anchoring
- This topic will be re-addressed at Annual Conference

Laminating – Julia Schimmelpenninck, Eastman Chemical Company – Aaron Thompson, Viracon, chaired this session

- Compression of Interlayers
 - o A summary of the testing results was provided. The primary takeaway will be featured in the Heavy Glass Door Design Guide
- Deflection Tables
 - o Featured in the new *Engineering Standards Manual* on minimum thickness guidelines for fully tempered glass
 - o Considering adding laminated tempered glass
 - o A task group meeting will be setup in the coming month
- Marking and Labeling GIB
 - o Completed systematic review; updates were made to the standards list and the document is at ballot
- Glass Floors and Stairs
 - o Completed systematic review with updates identified.
 - o Task Group: Sylvain Denis, Vaughn Schauss, Michael Saroka, Nathalie Thibault, Melissa Szotkowski, Julia Schimmelpenninck
- SGCC Update
 - o Certifies for ANSI Z97.1, CPSC 15 CFR 1201 and CAN/CGSB 12.01-2017
 - o Next meeting: October 9-10, 2019 in Chicago with WJE
 - o Lab training exam implemented in 2019; mandatory for lab personnel in 2020
 - o Reviewing certification for plastics to ANSI Z97.1
 - o Voluntary Pilot Study for coated glass is underway
 - o New SGCC Plant QA Requirements will be implemented in 2019 and made mandatory in 2020
- ANSI Z97.1 Update
 - o Committee ballot closes in August 2019 – to re-affirm the ANSI Z97.1-2015 as is currently published
 - Public comments will open in the fall in order to-republish in 2020
 - o Rationale to re-publish as is:
 - No substantive issues were found since publication
 - To continue having it in harmonization with CPSC and CGSB
 - o Membership:

- User, General Interest, Testing Lab, Prof/Trade Organizations categories are actively seeking new members
 - Financial assessment will be issued for the first time in 2-3 years
- Hurricane Product Substitution
 - GIB has been republished to reflect new changes in ASTM E1996
 - Content has been significantly updated to become consistent with the Annex A1.
- Laminated Glazing Reference Manual
 - Published online and available for sale
- AAMA/IGMA/NGA Laminating Pre-Qualification task group
 - Develop a method of testing and/or certification for glazing manufacturers to assure best practices for glass used in the hurricane impact market.
 - Task Group: Michelle Phan, John Bush, Dave Evans, Vaughn Schauss, Aaron Thompson, Rick Wright
- School Security Update
 - NFPA 3000 – shooter response standard
 - ASTM E54 and F12 – both only address schools; no other occupancies
 - ICC ad hoc committee on building safety and security established at end of 2018; comprised of the following work groups
 - Risk assessment, administration and planning, facilities hardening, surveillance, access control and hardware
 - Chicago adopted and modified the IBC locally to reintroduce 1-hour corridors in educational and business occupancies
- New Business
 - Acoustical Substitution Glazing task group with AAMA/IGMA
 - Acoustical performance of a window with different types of glazing
 - Ivan Zuniga, chair of the AAMA work group will inquire about making this a joint activity with NGA.

Protective Glazing – Vaughn Schauss, Kuraray America

- Protective Glazing 101 AIA Presentation
 - Completed task group work and is going through the ballot process
- Bird Friendly GIB
 - Undergoing systematic review and updating with the new voluntary standards and practices
- Security Glazing GIB
 - GIB under development; initially started as Security Glazing for Schools, it has been expanded to other occupancies such as businesses and religious buildings

Energy – Helen Sanders, Technoform

- Energy Applications GIB
 - Has been published and available online
- Health and Wellness Benefits webpage
 - The website is updated regularly and will also be used by the Advocacy Committee in its legislative efforts
- New Business
 - ASHRAE vs IECC
 - Status of code adoptions across the state – if a website is found, it will be added to the Resources page
 - Task Group: Helen Sanders (chair), Nathalie Thibault, Alex Blakeslee, Jen Daly, Stanley Yee, Ivan Zuniga, Tom Culp
 - Thermal comfort glass technical paper –

- Mitch Edwards will share some research. Helen to send article she wrote.

Other Business

- Recyclability survey
 - A joint effort with the Forming Committee to gain a supply chain picture of recyclability capabilities
 - Task Group: John Bush, Jon Griggs, Sylvain Denis, Jeff Haberer, Rick Wright, Catherine Ehlers

The meeting was adjourned at 4:30 pm ET. It was reconvened at 9:30 am ET on Thursday, August 15, 2019.

Group Discussion: Mock Ups & Specification Do's and Don'ts

- Discussed the need for both visual and performance mock ups, the need to view a project from both inside and outside and building, and for both big and small projects
- Factors that impact a successful mock up include:
 - Lighting accuracy
 - Material compatibility
 - How to reduce changeovers
 - Group discussed working with Installing Committee to work on a GTP on the importance of mock-ups.

Insulating – Jeff Haberer, Trulite

- Fabricator Considerations for Large Glass Products
 - The evolution of the document from 'oversized' to 'large' glass was discussed
 - The task group continues to meet to write the GIB
- Vacuum Insulating Glazing
 - As a newly established task group, the Project Creation Form was reviewed.
 - The task group provided all attendees a survey to provide immediate feedback on what information is missing or needed to guide the development of the GIB.
 - Surveys were gathered at the Conference; results will be compiled and shared with the task group prior to the next conference call
 - Task Group: add Steve Marino and Mark Cody
- Performance Criteria of PIB task group (joint with IGMA)
 - A compatibility test procedure was reviewed, which was initiated following the publication of the Compatibility Testing of Glazing Materials of PIB in IGUs document
- Compatibility Testing of Glazing Materials Related to the Performance of PIB in IGUs (joint with IGMA)
 - Published
- IGCC Update
 - Certification spec: ASTM E2190-2019
 - Next Meeting is May 5-6, 2020 in Nashville, TN
 - Current activities
 - Laboratory training exam launched and mandatory in 2019
 - Rapid Assessment Chamber is currently running test trials; fall 2019 data will be reviewed and a correlation study released in 2020
 - Incorporating ASTM standard revisions on muntin configuration, baseline test and some lab testing
- AGMT/AGMCC Update
 - Architectural Glass and Metal Certification Council (AGMCC) was formed as a 501c3 organization overseeing the AGMT and NACC programs
 - NACC has 22 certified contractors, 5 completed assessments and 13 assessments pending
 - AGMT began July 31, 2019
 - 177 certified glaziers
 - 9 testing sites
- IGMA Update
 - Activities within the various committees were reviewed: Emerging Technologies and Innovation, Technical Services, Certification, Education & Safety and other joint activities with AAMA and NGA.
 - Preventing IG Failures online training was launched in March 2018

- IG Fabricator Workshop will be held in a modified fashion at GlassBuild America in Sept 2019
 - Also on November 12-14 in Plano, TX
- Leadership development program began a new session in July 2019
- IGMA and AAMA members have officially voted to combine, effective Jan 1, 2020
- Potential New Work Items
 - Bent IGUs
 - A draft of this GIB was created several years ago, but tabled
 - ACTION: send to past task group participants to review and gauge interest
 - Secondary Sealants in IGUs
 - A draft of this GIB was created several years ago, but tabled
 - ACTION: send to past task group participants to review and gauge interest
 - Compare with ASTM verbiage to identify any gaps in information

Fire-Rated Glazing – Kevin Norcross, Vetrotech Saint-Gobain

- Fire Codes Update – Thom Zarembo, Roetzel & Andress
 - A Chicago modernization ordinance related to exit corridors fire resistance ratings was reviewed and compared to the 2018 IBC requirements for the same.
- Fire-Rated Glazing Today AIA presentation – published
- New Business
 - Establish a task group to review the relevant Glazing Manual text to update it for fire and other technologies, with the potential to also update existing GIB
 - Task Group: Chuck Knickerbocker and John Bush
 - Work on a document on Other Benefits of Fire Rated Glazing
 - Task Group: Chuck Knickerbocker, John Bush. Send out call for volunteers

Mirror – Dave Evans, Guardian Glass, LLC

- Green Aspects of Mirror GIB
 - The document received negatives during its systematic review ballot. A task group will be formed to address comments and generally update to current practices.
 - Task Group: Jeff Haberer, Sylvain Denis, Dave Evans
- New Business
 - The need for a document addressing copper-free mirror was expressed. It was also noted that topic generated the negative on the Green Aspects of Mirror ballot, mentioned above. The task group will address copper-free mirror as appropriate in the existing GIB before determining if a new resource is still needed.

Decorative – Sylvain Denis, Walker Glass Co., Ltd.

- Decorative Glazing Manual
 - The outline for the manual was reviewed noting the GIBs that are already available for use in the manual and those that may still need developed based on the goals of the manual: daylighting, indoor environment quality; and, fabricating and processing of decorative glass product.
- Defining an Acceptable Color Variance
 - The draft document was reviewed noting the goal being to set an acceptable color variance with a delta E number.
 - Task Group: add Elizabeth Cotton
- Measuring Color Variance in the Field
 - A new task group was formed to aid in the completion of the above GIB on Defining Acceptable Color Variance. This task group will develop a procedure to take color measurements in the field, using ASTM C1376 as a baseline.

- Task Group: Sylvain Denis, Michael Saroka, Kevin Ramus, Tim McGee, Randy Reynolds, Casey Anderson, John Hickey, Doug Schilling, Jim Gulnick, Elizabeth Cotton
- Best Practices for Installed Painted Decorative Glass
 - A Glass Magazine article was published in the May 2019 issue on the use of incompatible paints on glass.
 - Currently reviewing a list of potentially-relevant ASTM test methods to determine which may address the issue or not. The eventual goal will be to establish a performance standard based on the above research.
 - Task Group: add Elizabeth Cotton
- How to View Decorative Products in Interior and Exterior Applications
 - The goal of this task group is to produce charts that support ASTM for direct to glass and printed PVB. Work was tabled while ASTM C1172 and C1048 were being updated. Activity has resumed.
 - Task Group: Add Michael Saroka, Kevin Ramus, John Bush, Jim Gulnick, Gady Ginzburg (Dip-Tech), Tim McGee, Matt Hanna and Randy Reynolds, Elizabeth Cotton
- Decorative Glass Strength Properties GIB
 - Published
- Design Considerations for Use of Sealants/Adhesives with Coated Glass GIB
 - Published

New Business

- Michael Saroka – glazing tolerance color GIB
 - Using CMC space instead of delta E
 - Request ASTM (C14) update C1376 (5yr review) to use CMC
 - Will open a work item at ASTM and a Task Group within NGA
- Task Group: Kevin Ramus, Sylvain Denis, Michael Saroka, Jeff Haberer, Elizabeth Cotton

With no other business, the meeting was adjourned at 2:25 pm ET.

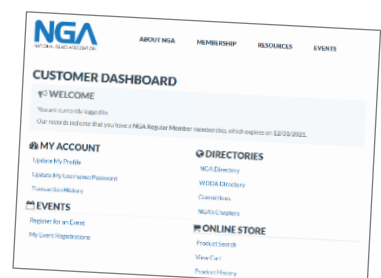
Advocacy & Representation

▪ ASTM	▪ ICC	▪ NGBS	▪ NFRC
▪ ASHRAE	▪ IGCC	▪ NIBS	▪ SGCC
▪ ANSI Z97	▪ GICC	▪ NFPA	▪ ISO

- Over 70 Glass Technical Papers – *most available at no cost*
- Technical manuals and guides written by industry experts – *NGA members save up to 50%*
 - Engineering Standards Manual – **new!**
 - Laminated Glazing Reference Manual – **new!**
 - Heavy Glass Door Design Guide – **new!**
 - Project Manager's Reference Manual
 - Glass and Glazing Estimating Essentials
 - Concepts for Analyzing Glass Tempering Problems education kit
 - GANA Guide to Architectural Glass
 - GANA/PGC Protective Glazing Manual
 - GANA Fabrication, Erection and Glazing Hours Manual
 - GANA Sealant Manual
 - GANA Glazing Manual - 50th Anniversary Edition
- Thirsty Thursday Webinars each month – *at no cost*
- White Papers – *available at no cost*
 - LEED Recycled Content for Glass
 - LEED White Paper – Decorative Glass
 - LEED White Paper – Mirror
- Test Methods
 - Standard Test Method for Ball Drop Impact of Laminated Architectural Flat Glass (ASTM F3007 – 2013)
 - Standard Specification for Ball Drop Impact Resistance of Laminated Architectural Flat Glass (ASTM F3006 – 2013)
 - Standard Test Method for Center-Punch Fragmentation of Fully Tempered Flat Glass
 - Standard Test Method for Laminated Glass Edges when in Contact with Sealants and Glazing Tapes

- Educational manuals and guides written by industry experts – *NGA members save up to 50%*
 - An Owner's Guide to Exit Planning & Succession
 - Employee Safety Guide
- White papers & presentations
 - All About Glass and Metal: A Guide for Architects & Specifiers – 6-part series
 - Guide to Decorative Glass
- Annual rankings
 - Top 50 Glaziers
 - Top Glass Fabricators
 - Top Metal Companies

- Visit glass.org and click on MY DASHBOARD in the upper right corner.
- You will be prompted to log in with the credentials provided to you by NGA. If you need assistance, contact Josh Lowe at 703/442-4890, ext. 127.
- You can now explore the Online Store and more!



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Intro to Glass and Glazing

- History of Glass
- The Float Glass Manufacturing Process
- Intro to Glazing Practices
- Glass and Wall Systems 101
- Architectural Metals 101
- Basics of Storefront and Entrances
- Basics of Curtainwall
- Sealant Basics
- Basics of Insulating Glass Units

Safety

- PPE for Working with Flat Glass
- Safe Glass Handling 101
- Best Practices for Removing Broken Glass

Glass & Metal Fabrication

- How to Cut Glass, Part I
- How to Cut Glass, Part II

- Metal Tools of the Trade
- Metal Fabrication Tools & Techniques
- Glass Fabrication Tools & Techniques
- Custom Mirror Design and Installation
- Shower Enclosure Design and Installation

System Fabrication, Assembly & Installation

- Storefront Metal Fabrication Techniques
- Stick Curtain Wall Fabrication Techniques
- Storefront Installation
- Curtainwall Installation
- Commercial Entrance Installation

Codes & Estimating

- Reading Plans & Blueprints
- Intro to Estimating

OSHA

- OSHA 10 and OSHA 30
- UL safety courses (29 courses)

Educational Conferences & Events – discounted NGA member pricing

BEC Conference

March 1-3, 2020

JW Marriott | Nashville, TN

--

NGA Glass Conference: Chicago (formerly Fall Conference)

July 28-30, 2020

Renaissance Chicago North Shore | Northbrook, IL

--

GlassBuild America

September 15-17, 2020

Las Vegas **FREE trade show pass for member employees**

NGA Glazing Executives Forum

September 15, 2020

Las Vegas

--

NGA Glass Conference: Clearwater Beach (formerly Annual Conference)

January 18-20, 2021

Opal Sands Resort | Clearwater Beach, FL

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GlassBuild America

September 14-16, 2021

Atlanta **FREE trade show pass for member employees**

Magazines & Newsletters – keeping members and the industry informed

- Glass Magazine, the glass and glazing authority – print, digital, and weekly news
- Window + Door, the information source for the fenestration industry - in print, digital, and weekly news
- NGA member newsletter monthly and NGA member Advocacy & Technical newsletter monthly

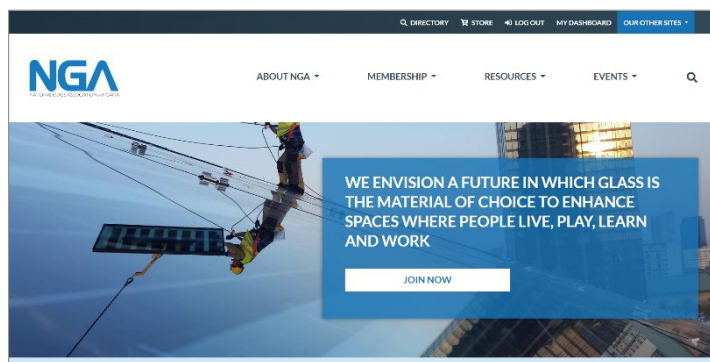
Member Recognition – Make an Impact

- Use of NGA member logo for your website, emails, letterhead, etc. as the symbol of your company's commitment to industry best practices, safety and ethics.
- Member decal and certificate to designate your NGA member status.

Visit the **NEW glass.org**

All of NGA's resources in one,
easy-to-use website!

Check it out today!



Quick Reference Sheet

Associations and Organizations:

- AAMA - American Architectural Manufacturers Association
- AIA - American Institute of Architects
- ANSI Z97 Committee - American National Standards Institute
- ASCE - American Society of Civil Engineers
- ASHRAE - American Society of Heating, Refrigerating, and Air-Conditioning Engineers
- ASTM International - American Society of Testing and Materials
- BEC Conference - Building Envelope Contractors Conference
- BOMA - Building Owners and Managers Association
- CSI - Construction Specification Institute
- CPSC - Consumer Product Safety Commission
- EWC/ASE - Efficient Windows Collaborative/Alliance to Save Energy
- FGIA - Fenestration and Glazing Industry Alliance
- GANA - Glass Association of North America (*legacy association*)
- GICC - Glazing Industry Code Committee
- GPD - Glass Performance Days
- Glasstec
- IWCA - International Window Cleaners Association
- IGCC - Insulating Glass Certification Council
- IGMA - Insulating Glass Manufacturers Alliance
- ICC - International Code Council
- ISO - International Standards Organization
- NFPA - National Fire Protection Association
- NFRC - National Fenestration Ratings Council
- NGA - National Glass Association
- NIBS - National Institute of Building Sciences
- PGC International - Protective Glazing Council International
- SGCC - Safety Glazing Certification Council
- UL - Underwriters Laboratory
- USGBC - United States Green Building Council
- WDDA - Window and Door Dealers Alliance
- WDMA - Window and Door Manufacturers Association

Other abbreviations:

- AN - Annealed
- EPD - Environmental Product Declarations
- ESM - Engineering Standards Manual
- FGMD - Flat Glass Manufacturing Division
- FRGC - Fire Rated Glazing Council
- FT - Fully Tempered
- GIB - Glass Informational Bulletin
- HGD - Heavy Glass Door
- HT - Heat-Treated
- IGU - Insulating Glass Unit
- ITF - Integration Task Force
- LCA - Life Cycle Analysis
- LGRM - Laminated Glazing Reference Manual
- PCF - Project Creation Form
- PCR - Product Category Rules
- PGC - Protective Glazing Committee
- RF - Radio Frequency
- SME - Subject Matter Expert

Information on meetings

Anyone can participate in discussions

- Voting members can make a motion and vote
- Each company has one vote. Does not mean that one individual has the vote in all situations.

NGA website: www.glass.org

SEE YOU NEXT TIME

BEC Conference
March 1-3, 2020
JW Marriott | Nashville, TN

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NGA Glass Conference: Chicago
July 28-30, 2020
Renaissance Chicago North Shore | Northbrook, IL

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GlassBuild America
September 15-17, 2020
Las Vegas Convention Center | Las Vegas, NV

NGA Glass Conference: Clearwater Beach
January 18-20, 2021
Opal Sands Resort | Clearwater Beach, FL

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BEC Conference
March 14-16, 2021
Caesars Palace | Las Vegas, NV

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GlassBuild America
September 14-16, 2021
Georgia World Congress Center | Atlanta, GA