

Minutes
Rigging Working Group

Thursday, 16 July 2020 17:00-20:00 Eastern Time
via WebEx

Chairpersons:

Bill Sapsis; Sapsis Rigging, Inc.; P; G
Christine Kaiser; Syracuse Scenery & Stage Lighting Co., Inc.; P; DR

Recording secretaries:

Karl Ruling & Richard Nix (ESTA)

Attendees:

Peter W. Batt; Mainstage Theatrical Supply, Inc; P; DR
Drew Becker; InterAmerica Stage, Inc.; A; CP
Bennett Brian; Reed Rigging Inc.; P; DR
Frederic Caron; O; U
Dan Culhane; Wenger Corp.; A; CP
Bruce Darden; InterAmerica Stage, Inc.; P; CP
Robert Dean; ZFX, Inc.; O; CP
Jonathan Deull; JSD Projects LLC; P; U
Tony Diemont; Texas Scenic Company; P; DR
Don Earl; Earl Girls, Inc.; P; DR
Bill Edwards; Tyler Truss Systems; A; MP
Mike Garl; Mike Garl Consulting LLC; P; DE
Ethan W Gilson; Entertainment Rigging Services, LLC; P; U
Sanford P. Gilzow; Shur-Rig LLC; P; G
Joe Golden; Gallagher Staging & Productions; P; DR
William B. Gorlin; M.G. McLaren, P.C.; P; G
Jerry Gorrell; Theatre Safety Programs; P; G
Pat Grenfell; Hoist Sales & Service; P; DR
Robert Haycock; UC Berkeley; I; U
Jeremy Hodgson; Jeremy Hodgson; I; G
Christine L. Kaiser; Syracuse Scenery & Stage Lighting Co., Inc.; P; DR
Theresa Kelley; Xtreme Structures and Fabrication; A; MP
Edwin S. Kramer; I.A.T.S.E. Local 1; P; U
Ryan Kunkel; Tait Towers Manufacturing LLC; A; CP
Kyle Kusmer; Steven Schaefer Associates, Inc; P; DE
Kalen Larson; ZFX, Inc.; P; CP
Ed Leahy; Chicago Flyhouse, Inc; P; CP
Jon Lenard; Applied Electronics; A; MP
Paul "Luke" Lewkowicz; Paul E Lewkowicz PC; O; DE
Michael Lichter; Electronic Theatre Controls, Inc.; A; MP
Jacob E. Loretto; Musson Theatrical Inc.; O; DR
Wendy Manson; O; G
Bill McIntyre; Show Distribution Group, Inc.; A; CP
Sam Michael; Thern, Inc.; P; MP
Orestes Mihaly; Production Resource Group; P; DR
Bartholomew J. Mueller; Recreation Engineering Inc.; P; DE
Reid Neslage; H & H Specialties Inc.; P; MP
Jim Niesel; Theatre Projects Consultants, Inc.; P; DE
Shawn Nolan; Rimkus Consulting Group, Inc; P; G
Miriam Paschetto; Geiger Engineers; P; DE
Luke Ricca; Luke Ricca; O; G
Steven Ricks; Electronic Theatre Controls, Inc.; P; MP
John Ringelman; Freeman Companies; P; DR

Ryan Roby; Production Resource Group; A; DR
Eric Rouse; Entertainment Project Services, LLC; P; CP
Bill Sapsis; Sapsis Rigging, Inc.; P; U
Chris Schmidt; Freeman Companies; A; DR
Steven Serafin; The Hartford Group; P; G
Mike Skinner; Contract Services Administration Trust Fund; P; U
Stewart Stephens; S2 Technologies; P; G
Peter V. Svitavsky; Wenger Corp.; P; CP
Jason Tello; T6 Truss Designs. LLC; P; CP
Will Todd; Area Four Industries; P; MP
Elmer Veith; Reliable Design Services; P; CP
Steve Walker; Steve A. Walker & Associates; P; G
Mike Webb; Motion Laboratories, Inc.; A; MP
Michael Wells; Xtreme Structures and Fabrication; P; MP
R. Duane Wilson; Amer. Society of Theatre Consultants; P; DE
Allen Winzler; Clark-Reder Engineering, Inc.; P; DE
Stephan Jon Wood; Tait Towers Manufacturing LLC; P; CP

Visitors:

Steve Beers; I.A.T.S.E. Local 1

1 Opening Remarks

Bill Sapsis called the meeting to order at 17:05, welcoming everyone and thanking them for taking time to participate, during these extraordinary times. He expressed his appreciation for everyone's continuing efforts as they try to "keep the ship afloat."

In memorium: Pete Happe

Bill Sapsis noted the passing of Pete Happe, affirming how much we enjoyed his participation in the meetings and at the get-togethers. We will miss his humor most of all.

2 Patent and anti-trust statements

2.1 Reading of the anti-trust statement

Bill Sapsis read the following statement aloud to the assembly:

ESTA and its members take seriously their obligation to comply with all applicable antitrust laws. Therefore, during this meeting and during all ESTA events, all discussions will be limited to those subjects that are permitted by the antitrust laws. All members should refrain from any discussion or mention of competitively sensitive subjects such as the current or future prices charged for any member product or services, current or future marketing plans or strategies, and current or future costs, including employee salaries. There also must be no agreement on the suppliers or customers that members will or will not do business with or the markets in which members will conduct business.

Violations of the antitrust laws can have serious consequences. If you have any questions or concerns about anything that is discussed at an ESTA meeting, please bring your concern to ESTA management. An easy to read pamphlet describing the antitrust laws is available from the ESTA staff.

Karl Ruling displayed the pamphlet in front of his camera for all video-enabled attendees to see. No concerns were raised.

2.2 Reading of the call for patents

Bill Sapsis read the following statement aloud to the assembly:

ESTA intends not to publish any standard that contains protected intellectual property, unless that information can be licensed by anyone for a reasonable fee. ESTA uses a process of open patent and copyright disclosures to implement its intent. ESTA does not conduct patent or copyright searches and does not warrant that its standards contain no protected intellectual property.

In keeping with the open disclosures policy, I ask if anyone present wishes to notify this working group of the existence of a patent, patent application, copyright, or other protected intellectual property that might protect material in a standard being developed by this working group. You need not be the holder of the patent or copyright to notify this working group of its existence.

Nothing was revealed.

3 Attendance and Membership

3.1 Requirements for membership

Bill Sapsis read the following statement aloud to the assembly:

Membership is open to all parties who are affected by the work of the group; membership in ESTA is not a requirement, but there is a \$100/person/year participation fee to help fund the costs of running the Technical Standards Program. Voting members are required to attend meetings and vote on letter ballots. Any principal member and alternate that both miss three consecutive meetings or that miss three consecutive letter ballots will have their membership status changed to observer. This action will be taken at the beginning of the first meeting after such inaction and will be recorded in the minutes of that meeting.

3.2 Introduction of attendees and circulation of sign-in sheet

3.3 Determination of a quorum

[There are 57 possible votes before today's actions. A quorum is 20, a supermajority is 29.]

Richard Nix identified the attendees and confirmed that a supermajority was present.

3.4 Processing of new membership and status change requests

As of today's date, the following applications or status change requests have been received:

*Stewart Stephens; S2 Technologies; P; G (Change of representation)
Luke Ricca; Luke Ricca; O; G (New application)
Shawn Nolan; Rimkus Consulting Group; P; G (Change of representation)
Wendy Manson; Wendy Manson; O; G (Change of representation)
Jeremy Hodgson; Jeremy Hodgson; I; G (Change of representation)
Frederic Caron; Frederic Caron; O; U (Change of representation)*

Elmer Veith moved to accept the applications. The motion was seconded and carried without objection or abstention.

3.5 Changes to observer status due to lack of attendance or missed letter ballots

3.5.1 Attendance notices

The following voters have missed two consecutive meetings, and their status will be changed to that of Observer if this meeting is missed:

3.5.2 Letter ballot notices

Responding to letter ballots is a requirement for voting status. The following voters have missed the last two letter ballots and will be moved to Observer status if the next letter ballot is missed.

*Accurate Staging, Inc; Ryan Riordan
Earl Girls, Inc.; Don Earl
PSAV Presentation Services; Carlos Ortega, Demian Purdy, Jacob Abbott
Rosebrand Wipers, Inc; Jesse Adams
Walt Disney Company; Ian Bevan, Lee Chuong*

3.5.3 Automatic status changes occurring before this meeting

The following automatic status changes have occurred since the last meeting:

Shawn Nolan (Change of Representation, see 3.4)
 Stewart Stephens (Change of Representation, see 3.4)
 Jeremy Hodgson (Change of representation, see 3.4)
 Wendy Manson (Change of representation, see 3.4)
 Frederic Caron (Change of representation, see 3.4)
 Tom Lapp (no longer with CDS)

3.6 Consensus body

The table below shows the full consensus voting body as of today's meeting date, after all changes occurring as a result of this meeting's action have been applied. Please check it carefully.

Name	Representing	Status	Int Cat
Ryan Riordan	Accurate Staging, Inc.	P	CP
R. Duane Wilson	Amer. Society of Theatre Consultants	P	DE
Max A. Wilson	Applied Electronics	P	MP
Jon Lenard	Applied Electronics	A	MP
Will Todd	Area Four Industries	P	MP
Keith Bohn	Area Four Industries	A	MP
Ed Leahy	Chicago Flyhouse, Inc	P	CP
Allen Winzler	Clark-Reder Engineering, Inc.	P	DE
Ken Tilson	Columbus McKinnon Corp.	P	MP
Nick Fleming	Columbus McKinnon Corp.	A	MP
Mike Skinner	Contract Services Administration Trust Fund	P	U
Chris Moulton	Contract Services Administration Trust Fund	A	U
Don Earl	Earl Girls, Inc.	P	DR
Steven Ricks	Electronic Theatre Controls, Inc.	P	MP
Michael Lichter	Electronic Theatre Controls, Inc.	A	MP
Eric Rouse	Entertainment Project Services, LLC	P	CP
Joseph Champelli	Entertainment Project Services, LLC	A	CP
Joshua "Fritz" Friendensohn	Entertainment Project Services, LLC	A	CP
Ethan W Gilson	Entertainment Rigging Services, LLC	P	U
John Ringelman	Freeman Companies	P	DR
Chris Schmidt	Freeman Companies	A	DR
Joe Golden	Gallagher Staging & Production	P	DR
Miriam Paschetto	Geiger Engineers	P	DE
Reid Neslage	H & H Specialties Inc.	P	MP
Jeremy Hodgson	Jeremy Hodgson	I	G
Pat Grenfell	Hoist Sales & Service	P	DR
Edwin S. Kramer	I.A.T.S.E. Local 1	P	U
Rod Haney	I.A.T.S.E. Local 891	P	U
Ross Long	I.A.T.S.E. Local 891	A	U
Bruce Darden	InterAmerica Stage, Inc.	P	CP
Drew Becker	InterAmerica Stage, Inc.	A	CP
Jonathan Deull	JSD Projects LLC	P	U
William B. Gorlin	M.G. McLaren, P.C.	P	G
Peter W. Batt	Mainstage Theatrical Supply, Inc	P	DR
Mike Garl	Mike Garl Consulting LLC	P	DE

Name	Representing	Status	Int Cat
Rick Montgomery	Motion Laboratories, Inc.	P	MP
Mike Webb	Motion Laboratories, Inc.	A	MP
Michael Shaw	Motion Laboratories, Inc.	A	MP
Marty Weststrom	Mountain Productions Inc.	P	DR
Tim Hansen	Oasis Stage Werks	P	DR
Ryan Roby	Production Resource Group	A	DR
Orestes Mihaly	Production Resource Group	P	DR
Carlos Ortega	PSAV Presentation Services	P	U
Demian Purdy	PSAV Presentation Services	A	U
Jacob Abbott	PSAV Presentation Services	A	U
Jay Cid	R&M Materials Handling / Stagemaker	P	MP
Bartholomew J. Mueller	Recreation Engineering Inc.	P	DE
Bennett Brian	Reed Rigging Inc.	P	DR
Elmer Veith	Reliable Design Services	P	CP
Matt Panther	Reliable Design Services	A	CP
Richard J. Nix	Richard J. Nix	I	G
Shawn Nolan	Rimkus Consulting Group	P	G
Jesse Adams	Rose Brand Wipers, Inc	P	DR
Bill Sapsis	Sapsis Rigging, Inc.	P	U
Stewart Stephens	S2 Technologies	P	G
Joseph Jeremy	Show Distribution Group, Inc.	P	CP
Bill McIntyre	Show Distribution Group, Inc.	A	CP
Sanford P. Gilzow	Shur-Rig LLC	P	G
Dana Bartholomew	Silver State Wire Rope and Rigging	P	DR
Steve Walker	Steve A. Walker & Associates	P	G
Kyle Kusmer	Steven Schaefer Associates, Inc	P	DE
Mike Merz	Steven Schaefer Associates, Inc	A	DE
Christine L. Kaiser	Syracuse Scenery & Stage Lighting Co., Inc.	P	DR
Harold Ike Shippers	Syracuse Scenery & Stage Lighting Co., Inc.	A	DR
Jason Tello	T6 Truss Designs, LLC	P	CP
Tracie Allen	T6 Truss Design, LLC	A	CP
Stephan Jon Wood	Tait Towers Manufacturing LLC	P	CP
David Bond	Tait Towers Manufacturing LLC	A	CP
Ryan Kunkel	Tait Towers Manufacturing LLC	A	CP
Tony Diemont	Texas Scenic Company	P	DR
Russell Solomon	Texas Scenic Company	A	DR
Steven Serafin	The Hartford Group	P	G
Jim Niesel	Theatre Projects Consultants, Inc.	P	DE
Jerry Gorrell	Theatre Safety Programs	P	G
Sam Michael	Thern, Inc.	P	MP
Jeff Wilkowski	Thern, Inc.	A	MP
Paul Brunner	Thern, Inc.	A	MP
Dan Louis	Theta Consulting	P	G
Nathan Villines	Tyler Truss Systems	P	MP

Name	Representing	Status	Int Cat
Josh Conner	Tyler Truss Systems	A	MP
Bill Edwards	Tyler Truss Systems	A	MP
Robert Haycock	UC Berkeley	I	U
Tracy Nunnally	Vertigo	P	CP
John P. Moore	Vertigo	A	CP
Ian Bevan	Walt Disney Company	P	DE
Lee Chuong	Walt Disney Company	A	DE
Peter V. Svitavsky	Wenger Corp.	P	CP
Dan Culhane	Wenger Corp.	A	CP
Paul Zagajeski	Wenger Corp.	A	CP
Michael Wells	Xtreme Structures and Fabrication	P	MP
Mark Newlin	Xtreme Structures and Fabrication	A	MP
Theresa Kelley	Xtreme Structures and Fabrication	A	MP
Kalen Larson	ZFX, Inc.	P	CP
Total possible votes:		60	
Votes by interest category:	Custom market producer (CP):	11	
	Designer (DE):	8	
	Dealer or rental company (DR):	13	
	General interest (G):	10	
	Mass market producer (MP):	10	
	User (U):	8	
<i>Status key: P = Principal voter, A = Alternate voter, I = Individual voter</i>			

4 Approval of the minutes from the last meeting

[See RWGmin04-2020_DRAFTr1.pdf]

Dan Culhane moved to approve the minutes. The motion was seconded and carried without objection or abstention.

5 Approval of agenda

Richard Nix asked to add item 7.1, regarding the new project request that had been received from Joe Jeremy.

Dan Culhane moved to accept the agenda as revised. The motion was seconded and carried without objection or abstention.

6 Old Business

6.1 ANSI E1.1 – 2018, wire rope ladders (Revise, reaffirm or withdrawal by 27 September 2023)

Any news or action?

6.2 BSR E1.2 - 20xx, Entertainment Technology - Design, Manufacture and Use of Aluminum Trusses and Towers (Last published in 2012 – Open for revision). *Task group members:* Mike Garl (leader), Jacob Abbott, Keith Bohn, Jerry Gorrell, Jason Tello, Will Todd, Richard Nix, and Elmer Veith.

Any news or action?

Mike Garl reported that the task group had solicited other engineers for input regarding the last public review comments, and that discussion has continued and expanded to other topics. He said he expects to have an updated draft by October's meeting.

6.3 ANSI E1.4-1 - 2016, Entertainment Technology--Manual Counterweight Rigging Systems (Revise, reaffirm, or withdrawal by 11 October 2021)

6.4 BSR E1.4-2 - 202x, Entertainment Technology—Statically Suspended Rigging Systems

Task group members: Bart Mueller (leader) Ethan Gilson, Ted Jones, Jesse Adams, Brad Dittmer, and Peter Batt
[See BSR_E1-4-2_PR3 Proposed Resols_Completed.pdf and BSRE 1.4-2DRAFT_Rig2015-2023r7.pdf]

The task group has submitted two documents for the working group's review and approval.

Bart Mueller moved to approve the public review comment resolutions. There was discussion about resolutions 3, 4, and 6, which were revised slightly. The motion was revised accordingly, seconded, and carried without objections or abstentions.

Bart Mueller moved to send to fourth public review. The motion was seconded and carried without objection or abstentions.

6.5 ANSI E1.4-3 - 2020, Entertainment Technology - Manually Operated Hoist Rigging Systems
(Reaffirm, revise, or withdraw before 02 June 2025)

It's published!

6.6 ANSI E1.6-1 - 2019, Entertainment Technology--Powered Hoist Systems *Task group members:* Bill Gorlin (leader), Steve Walker, Eric Rouse, Pete Svitavsky, Shawn Nolan, and Chris Kaiser
[See BSR E1-6-1_PR1 CmmntSmmry.pdf]

The first public review ended on 29 June 2020. No comments were received. Approval as an ANS is the next step, requiring a motion and second, in order to initiate a letter ballot to decide the motion.

Bill Gorlin moved to accept the draft as an ANS. The motion was seconded and will be decided by letter ballot.

6.7 BSR E1.6-2 - 20xx, Entertainment Technology--Design, Inspection, and Maintenance of Electric Chain Hoists for the Entertainment Industry (last published in 2018 – Open for revision)

Task group members: Ken Tilson, John Ringelman, Ben Brian, Marty Westrom, Rick Montgomery, Chris Schmidt, Mike Weston, Sandy Gilzow, Jack Gallagher, and Elmer Veith (leader)

As of 29 June 2020 the motion is in Executive Committee letter ballot consideration.

6.8 ANSI E1.6-3 - 2019, Selection and Use of Serially Manufactured Chain Hoists in the Entertainment Industry (Revise, reaffirm or withdraw 07 October 2024)

Any news or action?

6.9 BSR E1.6-4 - 202x, Control of Electric Chain Hoists in the Entertainment Industry (Last published in 2013 – Open for revision)

Task group members: David Bond, Rod Haney, Rick Montgomery, John Ringelman, Elmer Veith, Jem Hodgson, Stephen Wood, Mike Webb, and Joe Jeremy (leader).

Any news or action?

John Ringelman reported that the task group had decided the original document had experienced scope creep, and so they had offered the new project request [per item 7.1]. He explained how the title of E1.6-4 would change, and the new project would address the selection and use. John moved to approve the new project request, which was seconded and approved without objection or abstentions.

A PINS will be filed.

6.10 ANSI E1.8 – 2018, Entertainment Technology—Loudspeaker Enclosures Intended for Overhead Suspension—Classification, Manufacture and Structural Testing (Revise, reaffirm or withdrawal by 29 November 2023)

Any news or action?

6.11 ANSI E1.15 - 2006 (R2016), Entertainment Technology--Recommended Practices and Guidelines for the Assembly and Use of Theatrical Boom & Base Assemblies (revision, reaffirmation, or withdrawal by 23 September 2021)

Any news or action?

6.12 ANSI E1.21 - 2020, Entertainment Technology — Temporary Structures Used for Technical Production of Outdoor Entertainment Events (Reaffirm, revise, or withdraw before 23 March 2025)

It's published!

6.13 ANSI E1.22 - 2016, Entertainment Technology - Fire Safety Curtain Systems (Revise, reaffirm, or withdrawal by 11 October 2021)

Any news or action?

6.14 BSR E1.39 - 202x, Entertainment Technology –Selection and Use of Personal Fall Arrest Systems on Portable Structures Used in the Entertainment Industry (Open for revision)

Task group members: Chris Schmidt, Ethan Gilson (leader), Will Todd, Dana Bartholomew, Shawn Nolan, Rod Haney, Mike Wells, Allen Winzler, and Bill Sapsis.

[See BSR_E1-39_PR1CmmntSmmry.pdf, BSR_E1-39_PR1CmmntResols reply 7.14.2020.pdf, and BSR_E1-39-202x_Rig2009-2107r9.pdf]

The first public review ended on 29 June 2020. A comment summary has been distributed to the working group.

Ethan Gilson reported that they had completed drafting proposed resolutions, and had revised the draft standard accordingly. The documents will be sent to the working group, for consideration at the next meeting.

6.15 ANSI E1.43 - 2016, Live performer flying effect standard (Revise, reaffirm, or withdrawal by 12 February 2021)

Any news or action?

Bill Sapsis reminded everyone that, at the last meeting, he had asked for those interested in volunteering for the task group to make their interest known to him. He said he had received a good response since then - enough for a task group.

Jonathan Duell moved to open the document for revision. The motion was seconded and carried without objection or abstention. A PINS will be filed.

Bill appointed Eric Rouse (task group leader), Jonathan Duell, Ryan Kunkel, Robert Dean, Tracy Nunnally and Bill Gorlin, Fred Caron and Stewart Stephens to the task group. He cautioned the task group against changing the current standard's scope.

6.16 Rigging Glossary

No updates.

6.17 ANSI E1.47 – 2020, Recommended Guidelines for Entertainment Rigging System Inspections
(Reaffirm, revise or withdraw before 18 June 2025)

It's published!

6.18 ANSI E1.50-1 – 2017, Requirements for the Structural Support of Temporary LED, Video & Display Systems (Revision, reaffirmation, or withdrawal by 14 August 2022)

6.19 ANSI E1.56 - 2018, Rigging Support Points Design, Fabrication, Installation, and Testing (Revision, reaffirmation or withdrawal by 06 November 2023)

6.20 BSR E1.67 – 202x, Design, Inspection, Maintenance, Selection, and Use of Hand-operated Chain- and Lever Hoists for the Entertainment Industry

Task group members: Mike Weston, Jake Abbott (leader), Dana Bartholomew; and Charlie Weiner, John Ringleman, Elmer Veith

Any news or action?

No updates. Jacob Abbot was not present, so John Ringelman was appointed task group leader. Elmer Veith was also appointed to the task group.

6.21 BSR E1.70 – 202x, Selection and Use of Ground Supported Winch Stands and Towers in the Entertainment Industry

Jacob Abbott, Ethan Gilson (task group leader), Eric Rouse, Will Todd, Elmer Veith, Ryan Riordan, and Max Wilson

Any news or action?

Ethan Gilson was appointed as task group leader. A reflector will be set up.

7 New business

7.1 New project request – Selection and use of chain hoist control systems

[See TSP_ProjectRequest - E1_6-5.pdf]

See prior discussion.

8 Other business and announcements

8.1 Above & Beyond Awards

Information on the Above & Beyond Awards may be found at http://tsp.esta.org/tsp/news/award_recipients.html.

The nomination site is open year round, and the award is designed for members to highlight the work of their peers. The website says nominations for this year are due November 1. The awards will be presented at the beginning of next year.

9 Schedule for future meetings

The meeting schedule may be found at <http://www.esta.org/ESTA/meetings.php>.

9.1 Fall 2020 meetings (via Webex)

The fall meetings will be held via WebEx. The Rigging Working Group is scheduled to meet at 14:00 Eastern Time on Tuesday, 13 October 2020.

9.2 Winter 2021 meetings (NAMM Anaheim, CA)

The winter 2021 meetings will again be held in conjunction with the Winter NAMM 2021 show, held from 21-24 January 2021, in Anaheim, CA. The meeting schedule has not yet been confirmed.

10 Adjournment

The agenda being complete, and there being no further business brought forth, Bill Sapsis declared the meeting adjourned at 18:48.

Rigging Working Group members as of 10 August 2020

Name	Representing	Status	Int cat
Jacob Abbott	PSAV Presentation Services	A	U
Jesse Adams	Rose Brand Wipers, Inc	P	DR
Tracie Allen	T6 Truss Designs. LLC	A	CP
Matthew Antonucci	Contract Services Administration Trust Fund	O	U
Brent Armstrong	Alpine Rigging & Structural Design	O	CP
William Ian Auld	Auld Entertainment	O	U
Robert Barbagallo	Solotech Inc.	O	DR
Dana Bartholomew	Silver State Wire Rope and Rigging	P	DR
Peter W. Batt	Mainstage Theatrical Supply, Inc	P	DR
William Beautyman	Limelight Productions, Inc.	O	DR
Drew Becker	InterAmerica Stage, Inc.	A	CP
Justin Bennett	University of the Incarnate Word	O	U
Ian Bevan	Walt Disney Company	P	DE
Roy Bickel	Roy Bickel	O	G
Tyler Bland	Walt Disney Company	O	U
Keith Bohn	Area Four Industries	A	MP
David Bond	Tait Towers Manufacturing LLC	A	CP
William Bradburn	Aerial Arts, Inc.	O	U
Bennett Brian	Reed Rigging Inc.	P	DR
Paul Brunner	Thern, Inc.	A	MP
David M. Campbell	Geiger Engineers	O	G
Frederic Caron		O	U
Joseph Champelli	Entertainment Project Services, LLC	A	CP
Lee Chuong	Walt Disney Company	A	DE
Jay Cid	R&M Materials Handling / Stagemaker	P	MP
Daniel J. Clark	Clark-Reder Engineering, Inc.	O	G
Benjamin Cohen	Chicago Flyhouse Inc.	O	CP
Josh Conner	Tyler Truss Systems	A	MP
Brandon Cox	Heavyweight Solutions	O	CP
Dan Culhane	Wenger Corp.	A	CP

Rigging Working Group members as of 10 August 2020

Name	Representing	Status	Int cat
Bruce Darden	InterAmerica Stage, Inc.	P	CP
David Darland	PSAV Presentation Services	O	U
Robert Dean	ZFX, Inc.	O	CP
Jonathan Deull	JSD Projects LLC	P	U
Tony Diemont	Texas Scenic Company	P	DR
Jim Digby	Event Safety Alliance	O	U
Brad Dittmer	Stage Labor of the Ozarks	O	U
Russ Dusek	I Weiss	O	MP
Don Earl	Earl Girls, Inc.	P	DR
Bill Edwards	Tyler Truss Systems	A	MP
Jennifer Ferguson	Kito Group	O	MP
Nick Fleming	Columbus McKinnon Corp.	A	MP
Tim Franklin	Theta Consulting LLC	O	G
Joshua "Fritz" Friedensohn	Entertainment Project Services, LLC	A	CP
Mike Garl	Mike Garl Consulting LLC	P	DE
James M. Garner	Walt Disney Company	O	G
Ethan W Gilson	Entertainment Rigging Services, LLC	P	U
Sanford P. Gilzow	Shur-Rig LLC	P	G
Joe Golden	Gallagher Staging & Productions	P	DR
William B. Gorlin	M.G. McLaren, P.C.	P	G
Jerry Gorrell	Theatre Safety Programs	P	G
Michael P. Gosenski	Rigging Systems LLC	O	U
Pat Grenfell	Hoist Sales & Service	P	DR
Phillip R. Hampton	Charcoalblue	O	DE
Rod Haney	I.A.T.S.E. Local 891	P	U
Tim Hansen	Oasis Stage Werks	P	DR
Sean Harding	Port Lighting Systems	O	G
Robert Haycock	UC Berkeley	I	U
Chris Higgs	Total Solutions Group	O	G

Rigging Working Group members as of 10 August 2020

Name	Representing	Status	Int cat
Jeremy Hodgson	Jeremy Hodgson	I	G
Nick Holmberg	PSAV	O	DR
Donald Hoffend_III	Avista Designs, LLC	O	G
Cedric Jackson	Screen Actors Guild - American Federation of Television & Radio Artists	O	G
Joseph Jeremy	Show Distribution Group, Inc.	P	CP
Ted Jones	Grand Stage	O	U
Christine L. Kaiser	Syracuse Scenery & Stage Lighting Co., Inc.	P	DR
Theresa Kelley	Xtreme Structures and Fabrication	A	MP
Jerald Kraft	JTH Lighting Alliance	O	CP
Edwin S. Kramer	I.A.T.S.E. Local 1	P	U
Ryan Kunkel	Tait Towers Manufacturing LLC	A	CP
Kyle Kusmer	Steven Schaefer Associates, Inc	P	DE
Tom Lapp	Cirque Du Soleil, Inc.	A	U
Kalen Larson	ZFX, Inc.	P	CP
Ed Leahy	Chicago Flyhouse, Inc	P	CP
Jon Lenard	Applied Electronics	A	MP
Phillip Lewis	Tait Towers Manufacturing LLC	O	CP
Paul "Luke" Lewkowicz	Paul E Lewkowicz PC	O	DE
Michael Lichter	Electronic Theatre Controls, Inc.	A	MP
Ross Long	I.A.T.S.E. Local 891	A	U
Jacob E. Loretto	Musson Theatrical Inc.	O	DR
Daniel H. Louis	Theta Consulting LLC	P	G
Wendy Manson		O	G
Bill McIntyre	Show Distribution Group, Inc.	A	CP
Mike Merz	Steven Schaefer Associates, Inc	A	DE
Sam Michael	Thern, Inc.	P	MP
Steven Michelman	Entertainment Project Services, LLC	O	CP
Orestes Mihaly	Production Resource Group	P	DR
Rick Montgomery	Motion Laboratories, Inc.	P	MP
John P. Moore	Vertigo	A	CP

Rigging Working Group members as of 10 August 2020

Name	Representing	Status	Int cat
Chris Moulton	Contract Services Administration Trust Fund	A	U
Bartholomew J. Mueller	Recreation Engineering Inc.	P	DE
John Neal	Rhino Staging	O	G
Reid Neslage	H & H Specialties Inc.	P	MP
Mark Newlin	Xtreme Structures and Fabrication	A	MP
Jim Niesel	Theatre Projects Consultants, Inc.	P	DE
Richard J. Nix	Richard J. Nix	I	G
Shawn Nolan	Rimkus Consulting Group, Inc	P	G
Tracy Nunnally	Vertigo	P	CP
Carlos Ortega	PSAV Presentation Services	P	U
Gregory Orth	WNP Services, Inc.	O	DR
Matt Panther	Reliable Design Services	A	CP
Miriam Paschetto	Geiger Engineers	P	DE
Kurt Pragman	Pragman Associates, LLC	O	G
Demian Purdy	PSAV Presentation Services	A	U
Luke Ricca	Luke Ricca	O	G
Steven Ricks	Electronic Theatre Controls, Inc.	P	MP
Mark Riddlesperger	LA ProPoint, Inc.	O	CP
John Ringelman	Freeman Companies	P	DR
Ryan Riordan	Accurate Staging, Inc.	P	CP
Ryan Roby	Production Resource Group	A	DR
Eric Rouse	Entertainment Project Services, LLC	P	CP
Tim Salamon	PSAV Presentation Services	O	DR
Bill Sapsis	Sapsis Rigging, Inc.	P	U
Peter A. Scheu	Scheu Consulting Services, Inc.	O	DE
Chris Schmidt	Freeman Companies	A	DR
Ford Sellers	Chauvet Lighting	O	MP
Steven Serafin	The Hartford Group	P	G
Michael Shaw	Motion Laboratories, Inc.	A	MP
Harold Ike Shippers	Syracuse Scenery & Stage Lighting Co., Inc.	A	DR

Rigging Working Group members as of 10 August 2020

Name	Representing	Status	Int cat
Mike Skinner	Contract Services Administration Trust Fund	P	U
Monica Skjonberg	Skjonberg Controls, Inc.	O	CP
Knut Skjonberg	Skjonberg Controls, Inc.	O	CP
John C. Snook	Thermotex Industries Inc.	O	CP
Lynn M. Snook	Thermotex Industries Inc.	O	CP
Russell Solomon	Texas Scenic Company	A	DR
Todd Spencer	PSAV Presentation Services	O	U
Stewart Stephens	S2 Technologies	P	G
Peter V. Svitavsky	Wenger Corp.	P	CP
Ross Taylor	Taylor & Taylor Associates	O	G
Jason Tello	T6 Truss Designs. LLC	P	CP
Ken Tilson	Columbus McKinnon Corp.	P	MP
Will Todd	Area Four Industries	P	MP
Stephen Vanciel	IATSE Local 631	O	U
Elmer Veith	Reliable Design Services	P	CP
Nathan Villines	Tyler Truss Systems	P	MP
Steve Walker	Steve A. Walker & Associates	P	G
Patrick Wallace	PSAV Presentation Services	O	U
Mike Webb	Motion Laboratories, Inc.	A	MP
Charlie Weiner	Eurotruss	O	MP
Michael Wells	Xtreme Structures and Fabrication	P	MP
Drew Wending	PSAV Presentation Services	O	DR
Marty Wesstrom	Mountain Productions Inc.	P	DR
Mike Weston	PSAV Presentation Services	O	DR
Jeff Wilkowski	Thern, Inc.	A	MP
Greg Williams	PSAV Presentation Services	O	G
R. Duane Wilson	Amer. Society of Theatre Consultants	P	DE
Max A. Wilson	Applied Electronics	P	MP
Allen Winzler	Clark-Reder Engineering, Inc.	P	DE
Stephan Jon Wood	Tait Towers Manufacturing LLC	P	CP

Rigging Working Group members as of 10 August 2020

Name	Representing	Status	Int cat
Jeong Sik Yoo	Ghost LX	O	DE
Andrew Young	Andrew Young	O	U
Paul Zagajeski	Wenger Corp.	A	CP