

Minutes
Rigging Working Group
Saturday, 22 July 2023
Marriott D/FW Westlake

Chairpersons:

Bill Sapsis; Sapsis Rigging, Inc; P; U (presiding)
Chris Kaiser; Syracuse Scenery & Stage Lighting Co., Inc.; P; DR

Recording secretaries:

Karl Ruling and Richard Nix (ESTA)

Attendees:

Jesse Adams; Rose Brand Wipers, Inc; O; DR
Jane Harrington, ARM; The Hartford Group; O; G
William Ian Auld; Auld Entertainment; O; U
Peter W. Batt; Mainstage Theatrical Supply, Inc; P; DR
David Boevers; Carnegie Mellon University; P; DE
Bennett Brian; Reed Rigging Inc.; P; DR
David Carmack; Dave Carmack Consulting, Inc.; P; G
John Caudill; Productions Unlimited; P; DE
Jay Cid; R&M Materials Handling / Stagemaker; P; MP
Dan Culhane; Wenger Corp.; A; CP
Robert Dean; ZFX, Inc.; P; CP
Jonathan Deull; JSD Projects LLC; P; U
Tony Diemont; Texas Scenic Company; A; MP
Michael Freeman; Texas Scenic Company; P; MP
Mike Garl; Mike Garl Consulting LLC; P; DE
Ethan W. Gilson; Entertainment Rigging Services, LLC; P; U
Joe Golden; Gallagher Staging & Productions; P; DR
William B. Gorlin; M.G. McLaren, P.C.; P; G
Jerry Gorrell; Theatre Safety Programs; P; G
Rod Haney; I.A.T.S.E. Local 891; P; U
Tim Hansen; Oasis Stage Werks; P; DR
Robert Haycock; Robert Haycock; I; U
Shane Kelly; Shane Kelly; I; U
Edwin S. Kramer; I.A.T.S.E. Local 1; P; U
Bartholomew J. Mueller; Recreation Engineering Inc.; P; DE
Cole Muth; Electronic Theatre Controls, Inc.; A; MP
Reid Neslage; Reid Neslage; I; G
Ryan Niemi; Sunset Dynamics; P; CP
Jim Niesel; Theatre Projects Consultants, Inc.; P; DE
Shawn Nolan; Clark-Reder Engineering, Inc.; A; G
Tracy Nunnally; Vertigo; P; CP
Robert Peterson; Shur-Rig LLC; A; G
Camille Petrillo; Sapsis Rigging, Inc.; O; U
Stefan Pries; NEP Live Events; P; DR
Ryan Riordan; Riordan Rigging LLC; P; U
Marco Robles; I.A.T.S.E. Local 80; P; U
Chris Schmidt; Freeman Companies; A; DR
Jonathan Shimon; University at Buffalo - SUNY; P; U
Eric Silzer; Reed Rigging, Inc.; A; DR
Mike Skinner; Contract Services Administration Trust Fund; P; U
Stewart Stephens; S2 Technologies; P; G
Ken Tilson; Columbus McKinnon Corp.; P; MP
Elmer Veith; Reliable Design Services; P; CP
Steve Walker; Steve A. Walker & Associates; P; G
Mike Webb; Motion Laboratories, Inc.; A; MP
Mike Weston; Encore Global; P; U
Max A. Wilson; Applied Electronics; P; MP
Allen Winzler; Entertainment and Rigging Engineering; P; DE

1 Opening Remarks

Bill Sapsis called the meeting to order at 19:00, welcoming everyone present, and thanking them for taking time to attend tonight's meeting.

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.

Richard Nix held up the pamphlet.

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

3.3 Determination of a quorum

There are 76 voting entities after application actions. A quorum is 26, a supermajority is 39.

Richard Nix confirmed that both requirements have been met.

3.4 Processing of new membership and status change requests

The following applications or status change requests have been received:

Camille Petrillo; Sapsis Rigging, Inc.; O; U (new application)

Ryan Niemi; Sunset Dynamics; P; CP (new application)

Johnathan Shimon; University at Buffalo – SUNY; P; U (new application)

*Daniel Schmidt; Western Illinois University; O; U (new application)
 Jesse Adams; Rosebrand Wipers; P; (status change request)*

Dan Culhane moved to approve the applications, with those applying for voting status but not present be approved as Observers. The motion was seconded and carried without objection or abstentions.

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:

*Daniel Louis, P.E.; Daniel Louis, P.E.
 Geiger Engineers; Miriam Paschetto
 Reliable Design Services; Elmer Veith, Matt Panther*

Dan Louis and Miriam Paschetto were not present, so their status was changed accordingly.

3.5.2 Letter ballot notices

The following voters have missed two consecutive letter ballots, and will be moved to Observer status if the next ballot is missed.

There are none.

3.5.3 Automatic status changes occurring before this meeting

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

Bill McIntyre – no longer works for Show Distribution Group, Inc

3.6 Consensus body

The consensus body, after today's working group meeting's actions, is as follows:

Name	Representing	Status	Int Cat
Brent Armstrong	Alpine Rigging & Structural Design	P	CP
R. Duane Wilson	Amer. Society of Theatre Consultants	P	DE
Peter A. Scheu	Amer. Society of Theatre Consultants	A	DE
Max A. Wilson	Applied Electronics	P	MP
Jon Lenard	Applied Electronics	A	MP
Neil Montour	Atlanta Rigging Systems	P	DR
David Boevers	Carnegie Mellon University	P	DE
Ed Leahy	Chicago Flyhouse, Inc	P	CP
Jeffrey M. Reder	Clark-Reder Engineering, Inc.	P	G
Shawn Nolan	Clark-Reder Engineering, Inc.	A	G
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
Dave Carmack	Dave Carmack Consulting Inc	P	G
Tyler DeLong	DeLong Rigging Solutions	P	U
Don Earl	Earl Girls, Inc.	P	DR
Steven Ricks	Electronic Theatre Controls, Inc.	P	MP
Michael Lichter	Electronic Theatre Controls, Inc.	A	MP
Cole Muth	Electronic Theatre Controls, Inc.	A	MP
Mike Weston	Encore Global	P	U
Drew Wending	Encore Global	A	U

Name	Representing	Status	Int Cat
Demian Purdy	Encore Global	A	U
Tim Salamon	Encore Global	A	U
Greg Williams	Encore Global	A	U
Simon Grant	Encore Global	A	U
Allen Winzler	Entertainment and Rigging Engineering	P	DE
Eric Rouse	Entertainment Project Services, LLC	P	CP
Joseph Champelli	Entertainment Project Services, LLC	A	CP
Joshua "Fritz" Friedensohn	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
Gert Jan Brouwer	Frontline Rigging & Motion B.V.	P	CP
Joe Golden	Gallagher Staging & Productions	P	DR
Ted Jones	Grand Stage	P	U
Zhou Jianzhao	Guangzhou Haoyang Electronic Co., Ltd.	P	CP
Pat Grenfell	Hoist Sales & Service	P	DR
Edwin S. Kramer	I.A.T.S.E. Local 1	P	U
Marco Robles	I.A.T.S.E. Local 80	P	U
Rod Haney	I.A.T.S.E. Local 891	P	U
Ross Long	I.A.T.S.E. Local 891	A	U
Pat Bash	In-House Production	P	DR
Bruce Darden	InterAmerica Stage, Inc.	P	CP
Drew Becker	InterAmerica Stage, Inc.	A	CP
Jeremy Hodgson	Jeremy Hodgson	I	G
Jonathan Deull	JSD Projects LLC	P	U
Jennifer Ferguson	Kito Group	P	MP
William B. Gorlin	M.G. McLaren, P.C.	P	G
Peter W. Batt	Mainstage Theatrical Supply, Inc	P	DR
Sam Michael	Sam Michael	I	DE
Mike Garl	Mike Garl Consulting LLC	P	DE
Rick Montgomery	Motion Laboratories, Inc.	P	MP
Mike Webb	Motion Laboratories, Inc.	A	MP
Michael Shaw	Motion Laboratories, Inc.	A	MP
Stefan Pries	NEP Live Events	P	DR
Reid Neslage	Reid Neslage	I	G
Tim Hansen	Oasis Stage Werks	P	DR
Orestes Mihaly	Production Resource Group	P	DR
Troy Atkinson	Production Resource Group	A	DR
Matt Jordan	Production Resource Group	A	DR
John Caudill	Productions Unlimited	P	DE
Jay Cid	R&M Materials Handling / Stagemaker	P	MP
Bartholomew J. Mueller	Recreation Engineering Inc.	P	DE
Bennett Brian	Reed Rigging, Inc.	P	DR
Eric Silzer	Reed Rigging, Inc.	A	DR
Elmer Veith	Reliable Design Services	P	CP
Matt Panther	Reliable Design Services	A	CP
Richard J. Nix	Richard J. Nix	I	G

Name	Representing	Status	Int Cat
Ryan Riordan	Riordan Rigging LLC	P	U
Robert Haycock	Robert Haycock	I	U
Jesse Adams	Rosebrand Wipers, Inc.	P	DR
Stewart Stephens	S2 Technologies	P	G
Bill Sapsis	Sapsis Rigging, Inc.	P	U
Shane Kelly	Shane Kelly	I	U
Joseph Jeremy	Show Distribution Group, Inc.	P	CP
Sanford P. Gilzow	Shur-Rig LLC	P	G
Robert Peterson	Shur-Rig LLC	A	G
Dana Bartholomew	Silver State Wire Rope and Rigging	P	DR
Siobhan Gee	Siobhan Gee	I	G
John Rourke	Stagecraft Industries, Inc	P	DR
Steve Walker	Steve A. Walker & Associates	P	G
Kyle Kusmer	Steven Schaefer Associates, Inc	P	DE
Ryan Niemi	Sunset Dynamics	P	CP
Christine L. Kaiser	Syracuse Scenery & Stage Lighting Co., Inc.	P	DR
Harold Ike Shippers	Syracuse Scenery & Stage Lighting Co., Inc.	A	DR
Stephan Jon Wood	Tait Towers Manufacturing LLC	P	CP
Ryan Kunkel	Tait Towers Manufacturing LLC	A	CP
Michael Freeman	Texas Scenic Company	P	MP
Russell Solomon	Texas Scenic Company	A	MP
Tony Diemont	Texas Scenic Company	A	MP
Jim Niesel	Theatre Projects Consultants, Inc.	P	DE
Jerry Gorrell	Theatre Safety Programs	P	G
Paul Brunner	Thern, Inc.	P	MP
Jeff Wilkowski	Thern, Inc.	A	MP
Tim Franklin	Theta Consulting	P	G
Thomas Cowdery	Thomas Cowdery	I	U
Charlie Weiner	Total Structures, Inc.	P	MP
Nathan Villines	Tyler Truss Systems	P	MP
Bill Edwards	Tyler Truss Systems	A	MP
Josh Conner	Tyler Truss Systems	A	MP
John Shimon	University at Buffalo - SUNY	P	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
Shane Rogers	Warner Bros. Discovery	P	U
Bryan Schafer;	Warner Bros. Discovery	A	U
Peter V. Svitavsky	Wenger Corp.	P	CP
Dan Culhane	Wenger Corp.	A	CP
Paul Zagajeski	Wenger Corp.	A	CP
Robert Dean	ZFX, Inc.	P	CP
Troy Trinkle	ZFX, Inc.	A	CP
		Total consensus votes:	76
Votes by interest category	Custom market producers (CP):		13
	Mass market producers (MP):		10

Name	Representing	Status	Int Cat
	Designers (DE):	10	
	Dealer or rental company (DR):	15	
	User (U):	16	
	General Interest (G):	12	

4 Approval of the minutes from the last meeting

[See *RWG_min_04-2023_DRAFT.pdf*]

Fix Ethan Gilson's name in the minutes.

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

5 Approval of agenda

Ethan Gilson moved to approve the agenda. The motion was seconded and carried without objection or abstentions.

6 Old Business

6.1 BSR E1.1 – 202x, Wire Rope Ladders (Open for revision)

Chris Schmidt (task group leader), Sandy Gilzow, Marco Robles, Pat Bash, and Joe Golden.

[See *BSR_E1-1_202x_Rig2004-2029r6a.pdf*]

The task group has submitted a draft for consideration.

Chris Schmidt moved to send to first public review. The motion was seconded and carried without objection or abstentions. The motion will forward to the TSC for consideration and, if carried there, a BSR8 will be filed with ANSI and the public review will commence soon thereafter.

6.2 ANSI E1.2 - 2021, Entertainment Technology - Design, Manufacture and Use of Aluminum Trusses and Towers (Reaffirm, revise, or withdraw by 06 May 2026).

6.3 ANSI E1.4-1 - 2022, Entertainment Technology--Manual Counterweight Rigging Systems (Reaffirm, revise, or withdraw by 27 October 2027)

6.4 ANSI E1.4-2 - 2021, Entertainment Technology—Statically Suspended Rigging Systems (Reaffirm, revise, or withdraw by 06 May 2026.)

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

6.6 ANSI E1.6-1 - 2021, Entertainment Technology--Powered Hoist Systems (Reaffirm, revise, or withdraw before 10 May 2024)

6.7 ANSI E1.6-2 - 2020, Entertainment Technology--Design, Inspection, and Maintenance of Electric Chain Hoists for the Entertainment Industry (Reaffirm, revise, or withdraw before 14 August 2025)

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

6.9 ANSI E1.6-4 - 2022, Design, Manufacture, and Inspection of Portable Controls for Electric Chain Hoists in the Entertainment Industry [Revise, reaffirm or withdraw before 30 October 2027]

6.10 ANSI E1.6-5 - 2022, Selection and Use of Portable Controls for Electric Chain Hoists in the Entertainment Industry [Revise, reaffirm or withdraw before 30 October 2027]

6.11 ANSI E1.8 – 2018, Entertainment Technology—Loudspeaker Enclosures Intended for Overhead Suspension—Classification, Manufacture and Structural Testing (Currently in reaffirmation)

The reaffirmation public review ended on 27 June 2023, with no comments received. Therefore a letter ballot on the motion to reaffirm will have been sent to the working group's voting members by the time this document is distributed.

The ballot was sent out. Richard Nix noted that six people people in this meeting have not yet voted. There are some "Yes with comments" votes, but no "No" votes.

6.12 ANSI E1.15 - 2006 (R2021), Entertainment Technology--Recommended Practices and Guidelines for the Assembly and Use of Theatrical Boom & Base Assemblies (Reaffirm, revise, or withdraw before 08 March 2026)

6.13 BSR E1.21 - 202x, Entertainment Technology — Temporary Structures Used for Technical Production of Outdoor Entertainment Events (open for revision) *Task group members:* Richard Nix (task group leader), Bill Gorlin, Dan Louis, Sandy Gilzow, Kyle Kusmer, Elmer Veith, Ryan Riordan, Joe Golden, Shawn Nolan, Allen Winzler, and Donald Scott.

The public review period ended on 27 June 2023, with no comments received. Anticipate a motion to approve as ANS.

Richard Nix moved to approve as an ANS. The motion was seconded and carried without objection or abstentions. A letter ballot will be issued. He also noted that E1.21 is now referenced in the International Building Code as well as the International Fire Code.

6.14 ANSI E1.22 - 2022, Entertainment Technology - Fire Safety Curtain Systems (Reaffirm, revise, or withdraw by 25 April 2027).

6.15 ANSI E1.39 - 202x, Entertainment Technology –Selection and Use of Personal Fall Arrest Systems on Portable Structures Used in the Entertainment Industry (Reaffirm, revise, or withdraw by 06 May 2026).

6.16 BSR E1.43 - 202x, Live performer flying effect standard (Open for revision) *Task group members:* Eric Rouse (task group leader), Jonathan Duell, Ryan Kunkel, Robert Dean, Tracy Nunnally, Bill Gorlin, and Stewart Stephens.

[See E1-43_PerformerFlyingSystems_Rig2020-2032r0c.pdf]

The task group has submitted a draft standard for the working group to consider for first public review.

Johnathon Duell moved to first public review. The motion was seconded. There was discussion about fixing a typo. The motion carried without objection or abstentions. The motion forwards to the TSC. If carried there, a NSR8 will be filed, and a public review will commence soon thereafter.

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

6.18 BSR E1.50-1 – 202x, Requirements for the Structural Support of Temporary LED, Video & Display Systems (Open for revision). *Task Group Members:* Charlie Weiner, Stefan Pries, Siobhan Ghee, Joe Golden, Sandy Gilzow (Task group leader), Robert Peterson, Steve Walker, and Richard Nix

[See BSR E1.50-1-202x_Rig2023-2001r0.pdf]

The task group has submitted a draft standard for the working group to consider for first public review approval.

Robert Peterson reported, there were minor changes, most of them updated reference standard version. Steve Walker moved to first public review. The motion was seconded and carried without objection or abstentions. The motion forwards to the TSC. If carried there, a BSR8 will be filed, and a public review will commence soon thereafter.

6.19 ANSI E1.56 - 2018, Rigging Support Points Design, Fabrication, Installation, and Testing (Reaffirm, revise or withdraw by 06 November 2023)

Any news or action?

Shawn Nolan moved to reaffirm. Seconded. Elmer Veith asked for clarification: does the task group want to open it up to revise or reaffirm. Shawn Nolan said the task group thinks it should be reaffirmed. Dan Culhane asked if we wanted to revise the document references. There was discussion about the reaffirmation process, Dan Culhane noted the older references, which would need to be updated anyway. Shawn Nolan withdrew the motion, and moved to open it for revision. The motion carried without objection or abstentions.

Bill Sapsis appointed Shawn Nolan (leader), Dan Culhane, Steve Walker, Chris Schmidt, Robert Dean, Shane Kelly to the task group. A PINS will be filed with ANSI.

6.20 ANSI E1.67 – 2021, Design, Inspection, Maintenance, Selection, and Use of Hand-operated Chain- and Lever Hoists for the Entertainment Industry (Reaffirm, revise, or withdraw by 06 May 2026).

6.21 BSR E1.70 – 202x, Selection and Use of Ground Supported Winch Stands and Towers in the Entertainment Industry *Task group members:* Ethan Gilson (task group leader), Eric Rouse, Will Todd, Elmer Veith, Ryan Riordan, Max Wilson, and Mike Weston.

This project has been idle since the PINS was filed in February of 2020. Is there still interest in continuing the project?

Ethan Gilson reported. He apologized to the working group for letting this slide for so long. He said he and Mike Weston had met and reviewed DIN 56950-3. They think they have some ideas. Bill Sapsis asked for a time commitment. Ethan Gilson said he thought they could have something within 6 months. Bill Sapsis stressed the importance of a deliverable within that time frame.

7 New business

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 deadline for nominations is 01 November.

Richard Nix noted that Chris Schmidt and Jesse Adams had received awards in the Event Safety and Stage Machinery Working Groups, respectively, earlier this week. Congratulations!

9 Schedule for future meetings

The meeting schedule is posted at <http://www.esta.org/ESTA/meetings.php>.

The Fall meetings will return to the Marriott DFW Westlake, the week of 02 October 2023. The Winter meetings will be held in conjunction with NAMM Show 2024, in Anaheim, CA during the week of 22 January 2024

Elmer noted the Spring meetings will be held in conjunction with the USITT Conference in Seattle, WA in March 2024. Summer meetings will co-locate with NATEAC in New York City in July – our meetings will be held in the days before the conference begins.

10 Adjournment

The agenda business complete, with no further business being brought forward, Bill Sapsis adjourned the meeting at 20:11.

Rigging Working Group members as of 22 Jul 2023

Name	Representing	Status	Int cat
Jesse Adams	Rose Brand Wipers, Inc	P	DR
Matthew Antonucci	Contract Services Administration Trust Fund	O	U
Jane Harrington, ARM	The Hartford Group	O	G
Brent Armstrong	Alpine Rigging & Structural Design	P	CP
Troy Atkinson	Production Resource Group	A	DR
William Ian Auld	Auld Entertainment	O	U
Robert Barbagallo	Solotech Inc.	O	DR
Dana Bartholomew	Silver State Wire Rope and Rigging	P	DR
Patrick Bash	In-House Production	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
Jordi Van Berkum	Cybermotion North America	O	DR
Ian Bevan	Walt Disney Company	P	DE
Roy Bickel	Roy Bickel	O	G
Tyler Bland	Walt Disney Company	O	U
David Boevers	Carnegie Mellon University	P	DE
Bennett Brian	Reed Rigging Inc.	P	DR
Gert Jan Brouwer	Frontline Rigging & Motion B.V.	P	CP
Paul Brunner	Thern, Inc.	P	MP
David M. Campbell	Geiger Engineers	O	G
David Carmack	Dave Carmack Consulting, Inc.	P	G
John Caudill	Productions Unlimited	P	DE
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
Darren Coats	Safety Factor Training and Consulting	O	U
Josh Conner	Tyler Truss Systems	A	MP
Thomas Cowdery	Thomas Cowdery	I	U
Brandon Cox	Heavyweight Solutions	O	CP
Dan Culhane	Wenger Corp.	A	CP
Bruce Darden	InterAmerica Stage, Inc.	P	CP
David Darland	Encore Global	O	U
Robert Dean	ZFX, Inc.	P	CP
Tyler DeLong	DeLong Rigging Solutions	P	U
Jonathan Deull	JSD Projects LLC	P	U

Rigging Working Group members as of 22 Jul 2023

Name	Representing	Status	Int cat
Tony Diemont	Texas Scenic Company	A	MP
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	P	MP
Nick Fleming	Columbus McKinnon Corp.	A	MP
Tim Franklin	Theta Consulting LLC	P	G
Michael Freeman	Texas Scenic Company	P	MP
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
Siobhan Gee	Siobhan Gee	I	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
Tiny Good	Showtech Australia	O	U
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
Simon Grant	Encore Global	A	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	Robert Haycock	I	U
Chris Higgs	Total Solutions Group	O	G
Jeremy Hodgson	Jeremy Hodgson	I	G
Donald Hoffend_III	Avista Designs, LLC	O	G
Quinten James	Flying By Troy	O	U
Joseph Jeremy	Show Distribution Group, Inc.	P	CP
Zhou Jianzhao	Guangzhou Haoyang Electronic Co., Ltd.	P	CP
Ted Jones	Grand Stage	P	U
Matt Jordan	Production Resource Group	A	DR
Christine L. Kaiser	Syracuse Scenery & Stage Lighting Co., Inc.	P	DR
Shane Kelly	Shane Kelly	I	U

Rigging Working Group members as of 22 Jul 2023

Name	Representing	Status	Int cat
Jerald Kraft	Electronic Theatre Controls, Inc	O	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
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
Ryan McAlpine	Foy Inven enterprises, Inc.	O	DR
Sam Michael	Sam Michael	I	DE
Orestes Mihaly	Production Resource Group	P	DR
Rick Montgomery	Motion Laboratories, Inc.	P	MP
Neil Montour	Atlanta Rigging Systems	P	DR
John P. Moore	Vertigo	A	CP
Chris Moulton	Contract Services Administration Trust Fund	A	U
Bartholomew J. Mueller	Recreation Engineering Inc.	P	DE
Cole Muth	Electronic Theatre Controls, Inc.	A	MP
John Neal	Rhino Staging	O	G
Reid Neslage	Reid Neslage	I	G
Ryan Niemi	Sunset Dynamics	P	CP
Jim Niesel	Theatre Projects Consultants, Inc.	P	DE
Richard J. Nix	Richard J. Nix	I	G
Shawn Nolan	Clark-Reder Engineering, Inc.	A	G
Tracy Nunnally	Vertigo	P	CP
Gregory Orth	WNP Services, Inc.	O	DR
Daniel Louis, P.E.	Daniel Louis, P.E.	I	DE
Matt Panther	Reliable Design Services	A	CP
Miriam Paschetto	Geiger Engineers	P	DE
Robert Peterson	Shur-Rig LLC	A	G
Camille Petrillo	Sapsis Rigging, Inc.	O	U
Kurt Pragman	Pragman Associates, LLC	O	G
Stefan Pries	NEP Live Events	P	DR
Demian Purdy	Encore Global	A	U
Jeffrey M. Reder	Clark-Reder Engineering, Inc.	P	G
Luke Ricca	Luke Ricca	O	G

Rigging Working Group members as of 22 Jul 2023

Name	Representing	Status	Int cat
Steven Ricks	Electronic Theatre Controls, Inc.	P	MP
Mark Riddlesperger	LA ProPoint, Inc.	O	CP
John Ringelman	Freeman Companies	P	DR
Ryan Riordan	Riordan Rigging LLC	P	U
Marco Robles	I.A.T.S.E. Local 80	P	U
Ryan Roby	Ryan Roby	O	U
Shane Rogers	Warner Bros. Discovery	P	U
John Rourke	Stagecraft Industries, Inc.	P	DR
Eric Rouse	Entertainment Project Services, LLC	P	CP
Tim Salamon	Encore Global	A	U
Bill Sapsis	Sapsis Rigging, Inc.	P	U
Bryan Schafer	Warner Bros. Discovery	A	U
Peter A. Scheu	Amer. Society of Theatre Consultants	A	DE
Chris Schmidt	Freeman Companies	A	DR
Daniel Schmidt	Western Illinois University	O	U
Donald Scott	Structural Engineering Institute of ASCE	O	DE
Ford Sellers	Chauvet Lighting	O	MP
Steven Serafin	The Hartford Group	O	G
Michael Shaw	Motion Laboratories, Inc.	A	MP
Jonathan Shimon	University at Buffalo - SUNY	P	U
Harold Ike Shippers	Syracuse Scenery & Stage Lighting Co., Inc.	A	DR
Eric Silzer	Reed Rigging, Inc.	A	DR
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	MP
Todd Spencer	Ventana Capital Investments LLC	O	G
Stewart Stephens	S2 Technologies	P	G
Patrick Stewart	Patrick Stewart	O	U
Peter V. Svitavsky	Wenger Corp.	P	CP
Ross Taylor	Taylor & Taylor Associates	O	G
Jason Tello	T6 Truss Designs. LLC	O	CP
Ken Tilson	Columbus McKinnon Corp.	P	MP
Will Todd	Area Four Industries	O	MP
Troy Trinkle	ZFX, Inc.	A	CP
Stephen Vanciel	IATSE Local 631	O	U

Rigging Working Group members as of 22 Jul 2023

Name	Representing	Status	Int cat
Elmer Veith	Reliable Design Services	P	CP
Michael Viau	Pinnacle Live	O	DE
Nathan Villines	Tyler Truss Systems	P	MP
Steve Walker	Steve A. Walker & Associates	P	G
Jason S. Waller	GIS Corporation US	O	MP
Mike Webb	Motion Laboratories, Inc.	A	MP
Charlie Weiner	Total Structures, Inc	P	MP
Drew Wending	Encore Global	A	U
Marty Wesstrom	Mountain Productions Inc.	O	DR
Mike Weston	Encore Global	P	U
Jeff Wilkowski	Thern, Inc.	A	MP
Greg Williams	Encore Global	A	U
R. Duane Wilson	Amer. Society of Theatre Consultants	P	DE
Max A. Wilson	Applied Electronics	P	MP
Allen Winzler	Entertainment and Rigging Engineering	P	DE
Stephan Jon Wood	Tait Towers Manufacturing LLC	P	CP
Jeong Sik Yoo	Ghost LX	O	DE
Andrew Young	Andrew Young	O	U
Paul Zagajeski	Wenger Corp.	A	CP