



# Technical Standards Program

## ESTA Standards Watch

Late April 2020 Volume 24, Number 8

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### Three new ESTA standards projects

Three projects have recently been filed with ANSI. One is a revision project being started by the Electrical Power Working Group. The other two are projects for new standards in the Stage Machinery Working Group.

**BSR E1.19, Recommended Practice for the Use of Class A Ground-Fault Circuit Interrupters (GFCIs) Intended for Personnel Protection in the Entertainment Industry**, is the EPWG project. It is a revision of ANSI E1.19-2015. The revision work is being done to offer better guidance on water and moisture hazard assessment and to remove references to GFCI products that are difficult or impossible to obtain.

**BSR E1.71, Powered Curtain Machines**, is a Stage Machinery Working Group project to establish requirements for the design, manufacture, installation, inspection, and maintenance of machines intended solely for the movement of curtains for performance, presentation, and theatrical production.

**BSR E1.72, Stage Floor Machinery**, is a Stage Machinery Working Group project to cover the requirements for the design, manufacture, installation, inspection, operation, and maintenance of powered machinery used for movement of floors used in performance, presentation, and theatrical productions. This would cover wagons, turntables, sloats, and possibly star traps.

These projects are just being started. If any reader wants to become involved, they can do so by either joining the appropriate working group or by commenting in future public reviews of the draft standards. Information about joining a working group is available at [https://tsp.esta.org/tsp/working\\_groups/index.html](https://tsp.esta.org/tsp/working_groups/index.html). Documents in

public review are posted for free download at [https://tsp.esta.org/tsp/documents/public\\_review\\_docs.php](https://tsp.esta.org/tsp/documents/public_review_docs.php). There is nothing listed on that page now, but there should be in a few weeks.

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### **“Be Scene - Be Heard” chat app and “Find a Therapist”**

The Behind the Scenes Mental Health and Suicide Prevention Initiative has launched "Be Scene - Be Heard" a 24/7/365 anonymous peer-to-peer chat app. Be Scene - Be Heard is designed to connect entertainment industry behind the scenes workers with industry peers. More information and a link to request a download of the app is available at [btshelp.org/chat](http://btshelp.org/chat).

The Behind the Scenes Mental Health and Suicide Prevention Initiative also has launched the Entertainment Industry Therapist Finder. This was developed in response to an industry survey conducted last fall where the results revealed just how prevalent the problem of finding therapists who understand something about the unique culture and stresses of the entertainment industry. The Finder only includes listings for mental health professionals who have previously worked with clients in the entertainment industry or who have personal professional experience in the industry themselves. You can find a therapist by visiting [btshelp.org/findatherapist](http://btshelp.org/findatherapist).

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### **ANSI Seeks Comments on Contactless Delivery International Workshop Agreement**

The American National Standards Institute is asking its stakeholders to submit feedback by 15 May 2020 on an International Workshop Agreement proposal for guidelines for contactless delivery service, which has seen an uptick among consumers amid the COVID-19 pandemic. The [IWA proposal](#) was recently circulated to the Technical Management Board of the [International Organization for Standardization](#).

The worldwide COVID-19 pandemic has raised concerns about the transmission of the disease, which can spread by direct contact with infected people and indirect contact with surfaces. As multiple global regions face lockdowns and mandated stay-in-place orders, many consumers are depending on grocery and restaurant delivery services. As a precautionary measure during the health crisis, various food delivery platforms are providing contactless delivery services.

ANSI seeks feedback from its stakeholders on these guidelines, which aim to:

- Avoid the risk of occupational exposure for the courier, and ensure the safety of consumers and courier;
  - Promote the protection of personal information, respecting the privacy of the consumer;
  - Meet consumers' diverse and personalized consumption needs; and
  - Provide a service mode of "contactless delivery," and guide the consumer market.
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### **WTO Technical Barrier to Trade notifications**

Notify US, the U.S. Department of Commerce's service to announce Technical Barrier to Trade filings, has announced TBTs that may be of interest to *Standards Watch* readers. If you have a problem with any TBT, you can protest through your representative to the World Trade Organization. See the guidance documents at <http://tsapps.nist.gov/notifyus/data/guidance/guidance.cfm> or <http://ec.europa.eu/growth/tools-databases/tbt/en/tbt-and-you/being-heard/> for advice on filing objections.

#### **Peru Notification PER/120**

**Date issued:** 3 April 2020

**Agency responsible:** Ministry of Health (MINSA)

**National inquiry point:** Ministry of Foreign Trade and Tourism (MINCETUR)

**Products covered:** 6307.90.30.00 Face-masks

**Title:** Technical specifications for the manufacture of cloth face-masks for use by the community

**Description of content:** The purpose of the present document is to establish technical specifications in order to lay down the design and manufacturing requirements for cloth face-masks for use by the community.

**Objective and rationale:** Protection of human health against the COVID-19 virus

**Relevant documents:** • NTP 329.200:2000. Materiales Médicos. Mascarillas quirúrgicas. Requisitos y métodos de ensayo. • ISO 4915:1991: Textiles -Stitch types - Classification and terminology Pan American Health Organization technical documents on coronavirus disease (COVID- 2019): • A WHO guide to inform

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and harmonize national and international pandemic preparedness and response • Resolución Directoral N° 002-2020-INACAL/DN la Norma Técnica Peruana (NTP) sobre mascarillas quirúrgicas. • Orígenes, Evolución y contextos de la tecnología Textil: La producción del tejido en la Prehistoria y La Protohistoria, arqueología y Territorio N° 9. 2012. pp. 133- 145, Universidad de Granada.

**Proposed date of adoption:** Not given by country

**Proposed date of entry into force:** Not given by country

**Final date for comments:** Not given by country

**Full text:** [https://tsapps.nist.gov/notifyus/docs/wto\\_country/PER/full\\_text/pdf/PER120\[1\]\(spanish\).pdf](https://tsapps.nist.gov/notifyus/docs/wto_country/PER/full_text/pdf/PER120[1](spanish).pdf) and [https://tsapps.nist.gov/notifyus/docs/wto\\_country/PER/full\\_text/pdf/PER120\[2\]\(spanish\).pdf](https://tsapps.nist.gov/notifyus/docs/wto_country/PER/full_text/pdf/PER120[2](spanish).pdf) [The first document gives a good description in Spanish of how a cloth face mask should be built and fitted. ¿No hablas español? It has pictures!]

#### **United States of America Notification USA/1614**

**Date issued:** 27 April 2020

**Agency responsible:** Office of Energy Efficiency and Renewable Energy (OEERE)

**National inquiry point:** USA WTO TBT Enquiry Point

**Products covered:** Commercial and industrial fans; Air or vacuum pumps, air or other gas compressors and fans; ventilating or recycling hoods incorporating a fan, whether or not fitted with filters (HS 8414)

**Title:** Energy Efficiency Program for Industrial Equipment: Test Procedures for Fans, Notice of Petition for Rulemaking (8 pages in English)

**Description of content:** Notice of petition for rulemaking; request for comments - This document announces receipt of a petition received by DOE on 10 January 2020, from the Air Movement and Control Association (AMCA), International, Air Conditioning Contractors of America, and Sheet Metal & Air Conditioning Contractors of America requesting that DOE establish a Federal test procedure for commercial and industrial fans. The petition, which appears at the end of this document, requests that DOE resume a previous DOE rulemaking effort to establish a Federal test procedure for commercial and industrial fans, and that such test procedure be based on an upcoming industry test method. This document summarizes the substantive aspects of this position and requests public comments on the merits of the petition.

**Objective and rationale:** Protection of the environment; Harmonization

**Relevant documents:** 85 Federal Register (FR) 22677, 23 April 2020; Title 10 Code of Federal Regulations (CFR) Part 431: <https://www.govinfo.gov/content/pkg/FR-2020-04-23/pdf/2020-08316.pdf>

The docket folder on Regulations.gov provides access to primary documents for this rulemaking, including the 2020-01-10 Joint petition requesting DOE to resume its rulemaking to develop a federal test procedure for commercial and industrial fans: <https://www.regulations.gov/docket?D=EERE-2020-BT-PET-0003>.

G/TBT/N/USA/636 Energy Conservation Program for Consumer Products and Certain Commercial and Industrial Equipment: Proposed Determination of Commercial and Industrial Fans, Blowers, and Fume Hoods as Covered Equipment The docket folder on Regulations.gov <https://www.regulations.gov/docket?D=EERE-2011-BT-DET-0045> provides access to the primary and supporting documents for the rulemaking associated with USA/636, as well as the comments received. A docket folder for Energy Conservation Standards for Commercial and Industrial Fans and Blowers is available on Regulations.gov, and provides access to additional relevant primary and supporting documents, as well as comments received:

<https://www.regulations.gov/docket?D=EERE-2013-BT-STD-0006>.

**Proposed date of adoption:** Not given by country

**Proposed date of entry into force:** Not given by country

**Final date for comments:** 26 May 2020

**Full text URL:** <https://www.govinfo.gov/content/pkg/FR-2020-04-23/pdf/2020-08316.pdf>

#### **European Union Notification EU/714**

**Date issued:** 23 April 2020

**Agency responsible:** EU-TBT Enquiry Point

**National inquiry point:** EU-TBT Enquiry Point

**Products covered:** Recently classified carcinogenic, mutagenic and reproductive toxicants (CMR) category 1A and 1B as substances on their own, as constituents of other substances or in mixtures that are placed on the market or used for supply to the general public, devices covered by EU Regulation 2017/745 on medical devices, persistent organic pollutants, certain liquid substances or mixtures, nonylphenol, azocolourants.

**Title:** Draft Commission Regulation amending Annex XVII to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of

Chemicals (REACH), as regards carcinogenic, mutagenic or reproductive toxicant (CMR) substances, devices covered by Regulation (EU) 2017/745 of the European Parliament and of the Council, persistent organic pollutants, certain liquid substances or mixtures, nonylphenol and testing methods for azocolourants (5 pages in English; 4 pages in English)

**Description of content:** In the first place, this draft Commission Regulation aims to include within the scope of entries 28 to 30 of Annex XVII to Regulation (EC) No 1907/2006 several substances, with the effect of restricting their placing on the market or use for supply to the general public as substances on their own, as constituents of other substances or in mixtures and to impose the requirement to mark packaging with the label "restricted to professional users". This is consequent on the recent classification of these substances as CMR category 1A or 1B under Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, as amended by Commission Regulation (EU) 2018/1480 and Commission Delegated Regulation (EU) 2020/217.

Moreover, this draft Commission Regulation aims to:

- delete three entries from Annex XVII to the REACH Regulation, as the substances concerned have been, or are about to be, incorporated into Regulation 2019/2012 on persistent organic pollutants;
- include an exemption, from the aforementioned entries 28 to 30, for devices covered by Regulation (EU) 2017/745 on medical devices;
- delete an obsolete paragraph mandating a review of the restriction on liquid substances or mixtures;
- delete obsolete references to "R phrases" from the restriction on liquid substances or mixtures;
- delete obsolete references to CMR classifications under Directive 67/548 from the titles of Appendixes 1-6 of Annex XVII;
- update the references to testing methods for azo colourants in Appendix 10 of Annex XVII, to reflect technical progress;
- and finally delete the CAS and EC numbers from entry 46 of Annex XVII, as their inclusion, in 2009, inadvertently reduced the scope of this entry, and the original intention of the legislator should be reflected again.

**Objective and rationale:** The abovementioned substances recently received new harmonised classifications as CMR category 1A or 1B. In accordance with Article 68(2) of Regulation (EC) 1907/2006 (REACH), the Commission may propose a restriction on the use of these substances and mixtures containing them by consumers. The other proposed changes aim to increase legal clarity and consistency, facilitate implementation and/or avoid double regulation.

**Relevant documents:** Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH Regulation): <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1423064258789&uri=CELEX:32006R1907>

**Proposed date of adoption:** Not given by country

**Proposed date of entry into force:** Not given by country

**Final date for comments:** 22 June 2020

**Full text:** [https://tsapps.nist.gov/notifyus/docs/wto\\_country/EU/full\\_text/pdf/EU714\[1\]\(english\).pdf](https://tsapps.nist.gov/notifyus/docs/wto_country/EU/full_text/pdf/EU714[1](english).pdf) and [https://tsapps.nist.gov/notifyus/docs/wto\\_country/EU/full\\_text/pdf/EU714\[2\]\(english\).pdf](https://tsapps.nist.gov/notifyus/docs/wto_country/EU/full_text/pdf/EU714[2](english).pdf)

#### **Kuwait Notification KWT/549**

**Date issued:** 27 April 2020

**Agency responsible:** Public Authority for Industry, Kuwait Standards and Metrology Department (PAI/KUWSMD)

**National inquiry point:** Public Authority for Industry, Kuwait Standards and Metrology Department (PAI/KUWSMD)

**Products covered:** Fall under scope of BS EN 143:2000 "Respiratory protective devices - Particle filters - Requirements, testing, marking"

**Title:** Respiratory protective devices - Particle filters - Requirements, testing, marking (38 page(s), in English)

**Description of content:** This standard specifies particle filters for use as components in unassisted respiratory protective devices with the exception of escape apparatus and filtering facepieces. Laboratory tests are included for the assessment of compliance with the requirements. Some filters complying with this Standard may also be suitable for use with other types of respiratory protective devices and, if so, shall be tested and marked according to the appropriate standard.

**Objective and rationale:** Protection of human health or safety; Protection of the environment

**Relevant documents:** NA. This standard was adopted by permission of British Standards

**Proposed date of adoption:** Not given by country  
**Proposed date of entry into force:** Not given by country  
**Final date for comments:** 26 June 2020

#### Canada Notification CAN/610

**Date issued:** 22 April 2020

**Agency responsible:** Department of Innovation, Sciences and Economic Development

**National inquiry point:** Foreign Affairs, Trade and Development Canada

**Products covered:** Radiocommunications Electromagnetic compatibility (EMC) including radio interference

**Title:** Consultation of ICES-003, Issue 7, Information Technology Equipment (including Digital Apparatus) (6 pages, available in English and French)

**Description of content:** Notice is hereby given by Innovation, Science and Economic Development Canada that the following consultation has been published at <https://www.rabc-cccr.ca/consultations/open/>:

- Interference-Causing Equipment Standard, ICES-003, Issue 7, Information Technology Equipment (including Digital Apparatus), sets the minimum requirements applicable to information technology equipment (ITE), including digital apparatus. These requirements include limits for and methods of measurement of radiated and conducted radio frequency emissions produced by ITE equipment, as well as administrative requirements applicable to such equipment.

**Objective and rationale:** Consultation

**Relevant documents:** Non applicable

**Proposed date of adoption:** Not given by country

**Proposed date of entry into force:** Not given by country

**Final date for comments:** 3 July 2020

**Full text:** [https://tsapps.nist.gov/notifyus/docs/wto\\_country/CAN/full\\_text/pdf/CAN610\(english\).pdf](https://tsapps.nist.gov/notifyus/docs/wto_country/CAN/full_text/pdf/CAN610(english).pdf)

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#### ANSI public review announcements

The following documents have been announced for public review by ANSI. Please send your comments before the deadline to the person indicated and to ANSI's Board of Standards Review at [psa@ansi.org](mailto:psa@ansi.org).

##### Due 8 June 2020

#### **BSR/ASSE Z244.1-2016 (R202x), The Control of Hazardous Energy Lockout, Tagout and Alternative Methods** (reaffirmation of ANSI/ASSE Z244.1-2016)

This standard covers machines, equipment, and processes in which the unexpected energization or start-up of the machines or equipment, release of stored energy, or the actions of persons could result in harm. This standard establishes requirements for the control of hazardous energy associated with machines, equipment or processes that could cause harm to personnel. The standard specifies the use of lockout (primary method), tagout, or alternative methods to control hazardous energy associated with machines, equipment, or processes that could cause harm to personnel. This standard applies to activities such as erecting, installing, constructing, repairing, adjusting, inspecting, unjamming, set up, testing, troubleshooting, cleaning, dismantling, servicing, and maintaining machines, equipment, or processes.

Single copy price: \$110.00

Order from and send comments to: [LBauerschmidt@assp.org](mailto:LBauerschmidt@assp.org)

#### **BSR/UL 231-202x, Standard for Safety for Power Outlets** (revision of ANSI/UL 231-2019)

The following changes in requirements to the Standard for Power Outlets, UL 231, are being proposed: (1) Update of GFCI requirements for power outlets and introduction of GFPE requirement; (2) Updates to limit number of service disconnects to one, and to add requirements for the accessibility of live parts on the line side of the service disconnect; (3) Use of eight AWG bonding conductors for boatyard and marina applications; and (4) Updated marking requirements for marina power outlets.

Single copy price: Free!

Access and offer comments at: <https://csds.ul.com/Home/ProposalsDefault.aspx>

## Final actions on American National Standards

The documents listed below have been approved by the ANSI Board of Standards Review or by an ANSI-Audited Designator on the date noted.

**ANSI/NFPA 3000-2021**, Standard for an Active Shooter/Hostile Event Response (ASHER) Program (new standard): 4 April 2020

**ANSI/NFPA 160-2021**, Standard for the Use of Flame Effects Before an Audience (revision of ANSI/NFPA 160-2016): 4 April 2020

**ANSI/NFPA 791-2021**, Recommended Practice and Procedures for Unlabeled Electrical Equipment Evaluation (revision of ANSI/NFPA 791-2018): 4 April 2020

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## Draft IEC & ISO documents

This section lists proposed documents that the IEC or ISO, or both, are considering for approval and that may be of interest to *Standards Watch readers*. Anyone interested in reviewing and commenting on a document should order a copy from their national representative and submit their comments through them. Comments from US citizens on IEC documents should be sent to Charles T. Zegers at [czegers@ansi.org](mailto:czegers@ansi.org). Comments from US citizens on ISO documents should be sent to Karen Hughes at [isot@ansi.org](mailto:isot@ansi.org). Any prices, if shown, are for purchases through ANSI. The sort order is by due date then alphanumeric.

**SyCSM/42/DTR, ISO/IEC TR 63306-1 ED1**: Smart Manufacturing Standards Map (SM2) - Part 1: Framework, 12 June 2020

**ISO/IEC DIS 19075-1**, Information technology - Guidance for the use of database language SQL - Part 1: XQuery regular expressions, 27 June 2020, \$88.00

**ISO/IEC DIS 19075-2**, Information technology - Guidance for the use of database language SQL - Part 2: Time-related information, 27 June 2020, \$102.00

**ISO/IEC DIS 19075-3**, Information technology - Guidance for the use of database language SQL - Part 3: SQL embedded in programs using the Java™ programming language, 27 June 2020, \$82.00

**ISO/IEC DIS 19075-4**, Information technology - Guidance for the use of database language SQL - Part 4: Routines and types using the Java™ programming language, 27 June 2020, \$119.00

**ISO/IEC DIS 19075-5**, Information technology - Guidance for the use of database language SQL - Part 5: Row pattern recognition, 27 June 2020, \$146.00

**ISO/IEC DIS 19075-6**, Information technology - Guidance for the use of database language SQL - Part 6: Support for JSON, 27 June 2020, \$155.00

**ISO/IEC DIS 19075-7**, Information technology - Guidance for the use of database language SQL - Part 7: Polymorphic table functions, 27 June 2020, \$185.00

**ISO/IEC DIS 19075-8**, Information technology - Guidance for the use of database language SQL - Part 8: Multidimensional arrays, 27 June 2020, \$125.00

**ISO/DIS 13849-1**, Safety of machinery - Safety-related parts of control systems - Part 1: General principles for design, 2 July 2020, \$175.00

**21A/727A/NP, PNW 21A-727**: General guidance for reuse of secondary cells and batteries, 3 July 2020

**65C/1012/CD, IEC 61918/AMD1 ED4:** Amendment 1 – Industrial communication networks - Installation of communication networks in industrial premises, 3 July 2020

**3/1445/CD, IEC 60757 ED2:** Code for designation of colours, 10 July 2020

**ISO/DIS 18449,** Green tea – Vocabulary, 10 July 2020, \$58.00

**JTC1-SC25/2949/CD, ISO/IEC 24383 ED1:** Information technology - Physical network security for the accommodation of customer premises cabling infrastructure and information technology equipment, 10 July 2020

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## Recently published IEC & ISO documents

Listed here are documents recently approved by the IEC or ISO that may be of use or interest to *Standards Watch* readers. Prices shown are from the [ANSI Webstore](#).

**ISO 10018:2020,** Quality management - Guidance for people engagement, \$68.00

**IEC/TR 61000-2-1 Ed. 1.0 b:1990,** Electromagnetic compatibility (EMC) - Part 2: Environment - Section 1: Description of the environment - Electromagnetic environment for low-frequency conducted disturbances and signalling in public power supply systems, \$164.00

**ISO/IEC TR 29110-3-1:2020,** Systems and software engineering - Lifecycle profiles for Very Small Entities (VSEs) - Part 3-1: Process assessment guidelines, \$232.00

**ISO/ASTM 52903-1:2020,** Additive manufacturing - Material extrusion based additive manufacturing of plastic materials - Part 1: Feedstock materials, \$45.00

**ISO 22483:2020,** Tourism and related services - Hotels – Service requirements, \$162.00

**ISO 22688:2020,** Brazing - Quality requirements for brazing of metallic materials, \$162.00

**IEC 60098 Ed. 4.0 b:2020,** Analogue audio disk records and reproducing equipment, \$235.00

**IEC 60947-1 Ed. 6.0 b:2020,** Low-voltage switchgear and controlgear - Part 1: General rules, \$410.00

**IEC 60947-3 Ed. 4.0 b:2020,** Low-voltage switchgear and controlgear - Part 3: Switches, disconnectors, switch-disconnectors and fuse combination units, \$375.00

**IEC 60086-4 Ed. 5.0 b cor.2:2020,** Corrigendum 2 - Primary batteries - Part 4: Safety of lithium batteries, \$0.00 FREE!

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## TSP meeting schedule

All times are EDT, and all meetings will be via WebEx, not face-to-face.

Control Protocols Working Group	10:00 – 13:00 EDT	Thursday 16 July 2020
Event Safety Working Group	10:00 – 13:00 EDT	Friday 17 July 2020
Floors Working Group	14:00 – 16:00 EDT	Wednesday 15 July 2020
Fog & Smoke Working Group	17:00 – 19:00 EDT	Wednesday 15 July 2020
Photometrics Working Group	14:00 – 17:00 EDT	Thursday 16 July 2020
Rigging Working Group	17:00 – 20:00 EDT	Thursday 16 July 2020
Stage Machinery Working Group	10:00 – 13:00 EDT	Wednesday 15 July 2020
Technical Standards Council	14:00 – 17:00 EDT	Friday 17 July 2020

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## ESTA Standards Watch

is distributed as a benefit to ESTA members and as a communication medium for participants in ESTA's Technical Standards Program. Original material is copyright ESTA.

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## **TSP donors who have made long-term, multi-year pledges**

About the Stage  
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Altman Lighting  
Barbizon Lighting Company  
B-Hive Industries  
Scott Blair  
BMI Supply  
Boston Illumination Group  
Candela Controls  
Chauvet  
City Theatrical  
Clark-Reder Engineering  
Columbus McKinnon Corporation  
Tracey Cosgrove and Mark McKinney  
Bruce Darden  
Doug Fleenor Design  
Earl Girls Inc. EGI Pro  
Electronic Theatre Controls  
Entertainment Project Services  
Geiger Engineers, PC  
Tony Giovannetti  
GLP German Light Products  
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Steve Walker & Associates  
Walt Disney Parks and Resorts  
Westview Productions  
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## Investors in Innovation, supporters of ESTA's Technical Standards Program

### VISIONARY LEADERS (\$50,000 & up)

ETC

PLASA

ProSight Specialty Insurance

#### VISIONARY (\$10,000 & up; >100 employees/members)

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Disney Parks Live Entertainment

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German Light Products

JR Clancy

McLaren Engineering Group

Rose Brand

Stage Rigging

Theatre Projects

TMB

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About the Stage

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Scott Blair

Boston Illumination Group

Candela Controls, Inc.

Clark Reder Engineering

Tracey Cosgrove & Mark McKinney

Doug Fleenor Design

EGL Event Production Services

Entertainment Project Services

Neil Huff

Interactive Technologies

Jules Lauve

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Michael Lay

Limelight Productions, Inc.

Link

John T. McGraw

Mike Garl Consulting

Mike Wood Consulting

Reed Rigging

Reliable Design Services

Alan Rowe

Sapsis Rigging Inc.

Dana Taylor

Steve Terry

Vertigo

Steve A. Walker & Associates

WNP Services

#### INVESTOR (\$3,000–\$9,999; >100 employees/members)

Actors' Equity Association

Barbizon Lighting Company

Golden Sea Professional Lighting Provider

IATSE Local 728

IATSE Local 891

Lex

NAMM

Rosco Laboratories

Texas Scenic Company

#### INVESTOR (\$1,500–\$4,999; 20–100 employees/members)

American Society of Theatre Consultants

BMI Supply

City Theatrical Inc.

H&H Specialties, Inc.

InterAmerica Stage, Inc.

Lycian Stage Lighting

Morpheus Lights

Niscon Inc.

#### INVESTOR (\$200–\$499; <20 employees/members)

Bruce Darden

Guangzhou Color Imagination LED Lighting

Kenney Drapery Associates, Inc.

Indianapolis Stage Sales & Rentals, Inc.

L1 Inc.

Lighting Infusion LLC

Mediam Sp. zo.o.

Nanyi Audio & Lighting Enterprise Co., Ltd.

Qdot Lighting Ltd.

Show Light Oy

#### SUPPORTER (\$50 - \$2,999; >100 employees/members)

Harlequin Floors

**SUPPORTER** (\$50 - \$1,499; 20–100 employees/members)

ACT Lighting Inc./AC Power Distribution  
ARM Automation, Inc.  
Ian Foulds, IATSE Local 873  
General Lighting Electronic Co. Ltd.  
Guangzhou YaFeng Optoelectronic Equipment Co.  
Guangzhou Yilaiming Photoelectric Technology Co.,  
Ltd.  
HAYA Light Equipment Ltd. Co.  
High Output  
InCord  
Intella Systems Co., Ltd.  
iWeiss  
LA ProPoint, Inc.  
Moss LED Inc.

Movecat GmbH  
Nanshi Lighting  
Oasis Stage Werks  
Shenzhen Ifountain Technology  
Skjonberg Controls Inc.  
Stage Equipment & Lighting  
Stagemaker  
Stageworks  
Syracuse Scenery and Stage Lighting Co., Inc.  
Taurus Light Co. Ltd.  
Ultratec Special Effects  
Vincent Lighting Systems  
Zhuhai Shengchang Electronics Co.

**SUPPORTER** (\$50 - \$199; <20 employees/members)

Capture Visualisation AB  
Clik Systems  
DMX Pro Sales  
Foshan Leiyuan Photoelectric Co. Ltd.  
Jack Gallagher  
Tony Giovannetti  
Pat Grenfell  
Beverly and Tom Inglesby  
Eddie Kramer  
Jason Kyle

LuxBalance Lighting  
Tyrone Mellon, Jr.  
Orange Pi DMX  
Lizz Pittsley  
Michael Skinner  
Studio T+L  
Terrier Marketing  
Stephen Vanciel  
Arjan van Vught

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Extraordinary legacy gift: Ken Vannice