



Technical Standards Program

ESTA Standards Watch

Late March 2020

Volume 24, Number 6

Table of Contents

Three draft ESTA standards available for public review.....	1
Two ESTA standards approved, to be published soon.....	2
Broadway Community help for New York.....	2
Advice on COVID-19 scams.....	2
More time for mobile elevating platforms safety & training.....	3
ANSI seeks input on potential new ISO management system standard: Project Management.....	3
Free behavioral health screening.....	3
WTO Technical Barrier to Trade notifications.....	3
Brazil Notification BRA/985.....	4
Brazil Notification BRA/986.....	4
Viet Nam Notification VNM/162.....	4
ANSI public review announcements.....	5
Due 20 April 2020.....	5
Due 27 April 2020.....	9
Due 4 May 2020.....	9
Due 6 May 2020.....	11
New ANS projects.....	12
Final actions on American National Standards.....	13
Draft IEC & ISO documents.....	14
Recently published IEC & ISO documents.....	15
TSP meeting schedule.....	16
TSP donors who have made long-term, multi-year pledges.....	17
Investors in Innovation, supporters of ESTA's Technical Standards Program.....	18

Three draft ESTA standards available for public review

Three ESTA draft standards are available for public review on the ESTA TSP website at <http://estalink.us/pr>. Anyone materially affected by any document is invited to review it and to offer comments before the deadline. The review documents are available for free; downloading costs you nothing but your time.

BSR E1.67, Entertainment Technology – Design, Inspection, Maintenance, Selection, and Use of Hand and Lever Chain Hoists in the Entertainment Industry, applies to manually operated chain and lever hoists used in the entertainment industry including, but not limited to, hoists used in theatre, musical touring, film, trade show and television industries, for the purposes of lifting, lowering, and tensioning, related to the production of shows and special events. Comments are due before the end of the day on 23 March 2020.

BSR E1.4-2, Entertainment Technology - Statically Suspended Rigging Systems, is about dead-hung systems permanently installed in performances spaces, places of assembly, and other areas used for entertainment purposes where not covered by other ANSI Entertainment Technology standards. This standard intends to establish minimum performance criteria, recommendations and guidelines that can be used for

installation, use, maintenance and inspection purposes. It also intends to establish minimum requirements for statically suspended rigging systems to safeguard health, safety and general welfare. Comments are due before the end of the day on 29 March 2020.

BSR E1.59, Entertainment Technology--Object Transform Protocol (OTP), describes a mechanism to transfer object transform information such as position, orientation and velocity over an IP network using a subset of the [ACN] protocol suite. It covers data format, data protocol, data addressing, and network management. Data transmitted is intended to coordinate visual and audio elements of a production and should not be used for safety critical applications. Comments are due before the end of the day on 6 April 2020.

Two ESTA standards approved, to be published soon

On Monday 23 March, ANSI's Board of Standards Review approved a revised version of **ANSI E1.21**, entitled **Temporary Structures Used for Technical Production of Outdoor Entertainment Events**, and approved the reaffirmation of **ANSI E1.17, Entertainment Technology - Architecture for Control Networks (ACN)**. ANSI E1.21 – 2020 is a revision, so it contains new information. ANSI E1.17 – 2015 (R2020) is a reaffirmation, so there are no substantive changes from the 2015 edition.

Both standards will be published soon at <http://tsp.esta.org/freestandards>, from which they will be downloadable at no cost, thanks to the sponsorship of ProSight Specialty Insurance. They also will be available for sale for \$40 on the ANSI and IHS websites at <https://webstore.ansi.org/> and <https://global.ihs.com/> respectively.

Broadway Community help for New York

The management of Open Jar Studios, a rehearsal space in the heart of New York's Broadway Theatre District, has reached out to New York State and City offices to see if there are ways the Broadway performance community can help with the NYS and NYC relief efforts to combat the COVID-19 pandemic. Information about Broadway Relief is available on the Open Jar Studio website at <https://www.openjarstudios.com/broadwayrelief>.

Manhattan Borough President, Gale Brewer, said that the City's highest priorities are face shields and surgical gowns and released specifications for needed medical supplies. The list is posted at https://docs.google.com/document/u/3/d/1-71FJTml1Q1kjSDLP0EegMERjg_0kk_7UfaRE4r66Mg/mobilebasic. Companies capable of making these things en masse can reach out to the City to begin contracting for those services. Visit <https://edc.nyc/covid-19-emergency-supply-sourcing-manufacturing> to start that process. Note that any shop producing these items becomes an essential business and would not be subject to the 100% workforce at home rule, but would be allowed to use up to 50% of the workforce occupancy with workers at least 6 feet apart.

These websites lead to documents with lots of links to chase. Some links eventually lead to non-daunting, practical advice on DIY personal protective equipment. For example, instructions for making your own pleated masks is available at <https://www.project-cloth-masks.com/about>. These are not claimed to be as good as N95 masks, but they are far better than nothing, and you can make these masks be interesting and colorful while keeping your hands busy.

Advice on COVID-19 scams

The Federal Communications Commission has created a "COVID-19 Consumer Warnings and Safety Tips" webpage at <https://www.fcc.gov/covidscams> to alert consumers to the proliferation of scam phone calls and texts related to the coronavirus pandemic. Scammers are promoting bogus cures, offering fake test kits, sending hoax text messages, and generally preying on virus-related fears. Audio samples on the website let you listen to some of these scam messages.

Fairfield University's Chief Information Security Officer, Justin Hickey, has issued advice to University faculty and staff about coronavirus scams, noting that coronavirus is being used by hackers to scare people into clicking on links, opening malicious attachments, or providing confidential information. The advice is to be careful with

anything related to the Coronavirus—emails, attachments, social media, phone calls—anything. Look out for subject lines like:

- Check updated Coronavirus map in your city
- Coronavirus Infection warning from local school district
- CDC or World Health Organization emails or social media Coronavirus messaging
- Keeping your children safe from Coronavirus

You also might get a scam phone call to raise funds for “victims.”

Hickey's advice was directed to members of the Fairfield University community, but it's good advice for anyone.

More time for mobile elevating platforms safety & training

The effective date for the new ANSI/SAIA A92 Suite of Standards, originally scheduled for December 2019, has been extended to 1 June 2020. The complete suite of standards includes:

- **ANSI/SAIA A92.20 – 2018**, Design, Calculations, Safety Requirements, and Test Methods for Mobile Elevating Work Platforms (MEWPs)
- **ANSI/SAIA A92.22 – 2018**, Safe Use of Mobile Elevating Work Platforms (MEWPs)
- **ANSI/SAIA A92.24 – 2018**, Training Requirements for the Use, Operation, Inspection, Testing, and Maintenance of Mobile Elevating Work Platforms (MEWPs)

A decision by the ANSI Board of Standards Review regarding appeals submitted on ANSI/SAIA A92.20 and A92.22 resulted in revision of language that violated the ANSI Commercial Terms Policy. The revisions were balloted and approved by the ASC A92 Main Committee. After the close of the ballot, the unresolved objectors were notified of their right to appeal. Two of those unresolved objectors have requested hearings, which has lengthened the process. More information about this postponement of the effective date is available at <https://www.saiaonline.org/a92>.

ANSI seeks input on potential new ISO management system standard: Project Management

The American National Standards Institute is seeking input from its constituents on a potential new field of technical activity within the International Organization for Standardization focusing on project, program, and portfolio management. ANSI requests that all interested U.S. parties respond to this [online questionnaire](#) by 25 April 2020. If it is determined by ISO TC 258 that there is a need, the next step would be for this committee to develop and submit a justification study to the Technical Management Board of ISO for its evaluation and approval.

[ISO Technical Committee \(TC\) 258](#) is exploring whether there is a need for a new, *requirements-based* standard, referred to as an [ISO Management System Standard](#), for a systematic approach to managing projects, programs, and portfolios. Current ISO standards related to project, program, and portfolio management are *guidance based*.

Free behavioral health screening

Behind the Scenes is offering a free online behavioral health screening program as part of its Mental Health and Suicide Prevention initiative. The online assessment tool and links to mental health resources are available at to <http://btshelp.org/mentalhealth>. The mental health resources address a range of issues from anxiety and depression to alcohol and substance misuse. There are 24/7/365 hotlines—24/7/366 in leap years.

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.

Brazil Notification BRA/985

Date issued: 23 March 2020

Agency responsible: National Institute of Metrology, Standardization and Industrial Quality (INMETRO) ;
National Telecommunications Agency – ANATEL

National inquiry point: TBT/WTO Enquiry Point (INMETRO)

Products covered: Telecommunication equipment

Title: Operational Procedure for Marking Anatel Homologation Identification in Telecommunications Products (7 page in Portuguese)

Description of content: Public Consultation Proposal for approval of the Operational Procedure for Anatel Identification Label in Telecommunications Products, aiming to comply with the provisions of article 63 of the Conformity Assessment and Homologation Regulation for Telecommunications Products, approved by Resolution No. 715, 23 October 2019. [TSM note: The regulation is about the rules for applicants to identify the products approved by the Anatel—labeling.]

Objective and rationale: Consumer Information

Relevant documents: - Process SEI number 53500.055416/2019-17: <https://www.anatel.gov.br/institucional/processo-eletronico>

Proposed date of adoption: 22 April 2020

Proposed date of entry into force: 22 April 2020

Final date for comments: 7 April 2020

Full text: [https://tsapps.nist.gov/notifyus/docs/wto_country/BRA/full_text/pdf/BRA985\(english\).pdf](https://tsapps.nist.gov/notifyus/docs/wto_country/BRA/full_text/pdf/BRA985(english).pdf) and [https://tsapps.nist.gov/notifyus/docs/wto_country/BRA/full_text/pdf/BRA985\(portuguese\).pdf](https://tsapps.nist.gov/notifyus/docs/wto_country/BRA/full_text/pdf/BRA985(portuguese).pdf)

Brazil Notification BRA/986

Date issued: 23 March 2020

Agency responsible: National Institute of Metrology, Standardization and Industrial Quality (INMETRO) ;
National Telecommunications Agency – ANATEL

National inquiry point: TBT/WTO Enquiry Point (INMETRO)

Products covered: Telecommunication equipment (cybersecurity)

Title: Minimum cybersecurity requirements for terminal equipment connecting to the Internet and for telecommunications network infrastructure equipments (6 pages in Portuguese)

Description of content: Public Consultation for approval of minimum cybersecurity requirements for terminal equipment connects to the Internet and for telecommunications network infrastructure equipment, aiming to minimize vulnerabilities by means of software/firmware updates or by means of recommendations on configurations and remote management methods. [TSM note: The proposed regulations deal with security for the Internet of Things. IEEE, IETF, ENISA, and GSMA documents about IoT are cited.]

Objective and rationale: Consumer information; Consumer information, labelling

Relevant documents: SEI process number 53500.026122/2019-70:

<https://www.anatel.gov.br/institucional/processo-eletronico>

Proposed date of adoption: Not given by country

Proposed date of entry into force: Not given by country

Final date for comments: 17 May 2020

Full text: [https://tsapps.nist.gov/notifyus/docs/wto_country/BRA/full_text/pdf/BRA986\(english\).pdf](https://tsapps.nist.gov/notifyus/docs/wto_country/BRA/full_text/pdf/BRA986(english).pdf) and [https://tsapps.nist.gov/notifyus/docs/wto_country/BRA/full_text/pdf/BRA986\(portuguese\).pdf](https://tsapps.nist.gov/notifyus/docs/wto_country/BRA/full_text/pdf/BRA986(portuguese).pdf)

Viet Nam Notification VNM/162

Date issued: 19 March 2020

Agency responsible: Ministry of Health, Health Environment Management Agency

National inquiry point: WTO TBT Enquiry Point Vietnam

Products covered: Disinfectants and antiseptics

Title: Draft Circular promulgating the List of active ingredients banned from use and restricting the scope of insecticide and disinfectant registration for household and medical use in Vietnam (7 pages in Vietnamese)

Description of content: The draft Circular promulgating the list of active ingredients banned from use and restricted in scope of use in household and public health insecticides and disinfectants. The draft applies to

organizations and individuals which produce, trade, import and export the household and public health insecticides and disinfectants for circulation in Vietnam and relevant agencies, organizations and individuals

Objective and rationale: Protection of human health or safety

Relevant documents: • Decree No. 91/2016/ND-CP dated 01/7/2016 on management of household and public health insecticides and disinfectants

• Decree No. 155/2018/ND-CP dated 12/11/2018 on amendments related to business conditions under state management of the Ministry of Health

Proposed date of adoption: 1 June 2020

Proposed date of entry into force: 1 August 2020

Final date for comments: 18 May 2020

Full text: [https://tsapps.nist.gov/notifyus/docs/wto_country/VNM/full_text/pdf/VNM162\(vietnamese\).pdf](https://tsapps.nist.gov/notifyus/docs/wto_country/VNM/full_text/pdf/VNM162(vietnamese).pdf)

[The text is in Vietnamese, but 21 of the 22 chemicals are listed in roman characters and 20 have CAS numbers. Naphthalene, used in mothballs and some theatrical flame effects, is on the list. The one chemical listed only in Vietnamese is Hợp chất Chì, which is a lead compound.]

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.

Due 20 April 2020

BSR/ASTM E84-202x, Test Method for Surface Burning Characteristics of Building Materials (revision of ANSI/ASTM E84-2019)

https://www.astm.org/ANSI_SA

Single copy price: Free

Order from and offer comments to: Corice Leonard, accreditation@astm.org

BSR/ASTM E136-202x, Test Method for Assessing Combustibility of Materials Using a Vertical Tube Furnace at 750C (revision of ANSI/ASTM E136-2019)

https://www.astm.org/ANSI_SA

Single copy price: Free

Order from and offer comments to: Corice Leonard, accreditation@astm.org

BSR/IES RP-16-2017, Addendum 4-202x, Nomenclature and Definitions for Illuminating Engineering (addenda to ANSI/IES RP-16-2017)

Includes changes and deletions to lighting definitions in ANSI/IES RP-16-17.

Single copy price: \$25.00

Order from and send comments to: Patricia McGillicuddy, pmcgillicuddy@ies.org

BSR/IES LS-3-202x, Lighting Science: Physics and Optics of Radiant Power (new standard)

This document describes the physics of radiant energy for various light source types, as well as the physical optics used for manipulating light.

Single copy price: \$25.00

Order from and send comments to: Patricia McGillicuddy, pmcgillicuddy@ies.org

BSR/IES LP-6-202x, Lighting Practice: Lighting Control Systems - Properties, Equipment and Specification (new standard)

This Lighting Practice document is intended to help designers, users, commissioning providers, and other interested parties understand fundamental characteristics and purposes of lighting control systems. These may include energy-saving strategies, design considerations, energy saving strategies, equipment, and the variety of organizing protocols and methods in common usage.

Single copy price: \$25.00

Order from and send comments to: Patricia McGillicuddy, pmcgillicuddy@ies.org

BSR/IES LS-6-202x, Lighting Science: Calculation of Light and Its Effects (new standard)

The purpose of this Lighting Science document is to provide the theoretical basis for lighting calculations, to describe how this theory is approximated and used, and to describe how it is embodied in most lighting analysis software. This can provide, from a user's perspective, an understanding of the power and limitations of calculations—however performed—and thus make clear their use in the lighting design process.

Single copy price: \$25.00

Order from and send comments to: Patricia McGillicuddy, pmcgillicuddy@ies.org

BSR/IES LP-7-202x, Lighting Practice: The Lighting Design and Construction Process (new standard)

IES LP-7-20 covers the essential process that a lighting practitioner follows in concert with members of the building team to document a design for construction.

Single copy price: \$25.00

Order from and send comments to: Patricia McGillicuddy, pmcgillicuddy@ies.org

BSR/IES LS-8-202x, Lighting Science: Vision - Perceptions and Performance (new standard)

This document provides an overview of visual perceptions and performance, covering topics such as brightness, glare, flicker, visibility, and illuminance criteria. It introduces scientific literature and past research results but does not serve as a complete literature review on any specific topic. The document provides basic descriptions and background of visual phenomena in order to guide lighting practitioners. For some topics, established formulas and processes are reviewed, but specific criteria or other recommendations are not provided. This document begins with a review of psychophysics, which is the primary method of study for perception and performance, in order to help readers understand the strength and limitations of the provided material.

Single copy price: \$25.00

Order from and send comments to: Patricia McGillicuddy, pmcgillicuddy@ies.org

BSR/IES LP-11-202x, Lighting Practice: Environmental Considerations for Outdoor Lighting (new standard)

This Lighting Practice (LP) document outlines the environmental considerations of exterior lighting, especially as related to glare, sky glow, light trespass, and the impact of electric light at night on flora and fauna. In addition, this LP provides information on how to assign lighting zones, and how to use the Joint IDA-IES Model Lighting Ordinance (MLO) with User's Guide, as a basis for an exterior lighting ordinance. Finally, this LP discusses community-based design and makes specific recommendations for lighting outdoor areas.

Single copy price: \$25.00

Order from and send comments to: Patricia McGillicuddy, pmcgillicuddy@ies.org

BSR/IES LM-61-202x, Approved Method: Identifying Operating Factors for Installed High Intensity Discharge Luminaires (new standard)

This LM outlines factors that can cause differences between calculated and measured illuminance and luminance values of outdoor high-intensity discharge (HID) and low-pressure sodium (LPS) lamps and luminaires. It does not offer solutions, nor does it quantify all of the possible variables that might be encountered. The relevant ANSI/IES Recommended Practice document should be consulted for specific design recommendations.

Single copy price: \$25.00

Order from and send comments to: Patricia McGillicuddy, pmcgillicuddy@ies.org

BSR/IES LM-72-202x, Approved Method: Directional Positioning of Photometric Data (new standard)

It is important to note that this document assigns specific, standard meaning to certain words; thus, some users might need to adjust their vocabulary. This document does not show a preference for any system, but rather describes each of the three systems and then explains how to convert between them. In applying CN or CCE, four types of angular "rotation" are defined (Orient, Tilt, Roll, and Spin), and each shall be performed in the defined order. Any or all of the rotation angles may be zero. Each subsequent rotation is applied to the axis system as previously rotated (the local axes), not the original axis system (the global axes). Orientation, Tilt, Roll, and Spin can be described using X, Y, and Z axes, but the CN system and CCE system are described separately, and separate drawings of the coordinate system are needed.

Single copy price: \$25.00

Order from and send comments to: Patricia McGillicuddy, pmcgillicuddy@ies.org

BSR/IES RP-2-202x, Recommended Practice: Lighting Retail Spaces (new standard)

This Recommended Practice was written for designers with varying levels of experience in retail lighting design. The study of this Recommended Practice, including the references and annexes found at the back, should serve as a foundation for good retail and merchandise lighting. For optimum success in lighting retail spaces (or where specialized merchandise lighting is required), the services of a professional specializing in retail merchandise lighting design is recommended. Ideally, this lighting professional should join the design team during the early stages of project development.

Single copy price: \$25.00

Order from and send comments to: Patricia McGillicuddy, pmcgillicuddy@ies.org

BSR/IES RP-10-202x, Recommended Practice: Lighting Common Applications (new standard)

This Recommended Practice primarily addresses design considerations and illuminance criteria for common areas, which should influence luminaire optical selections, light source choices, and final layouts. It is important that deliberate thought be given to details beyond the recommended illuminances in this chapter. For example, in Section 3.6, Food Service, the vertical illuminance citation does not necessarily demand a uniform array of low-wattage wall washers. Such lighting can be achieved with uplight or downlight in each shelf, a perimeter slot-like detail along the back bar elevation, adjustable accents, the smallest of daylight-slots in the top of the back bar (for at least the daytime condition), or some combination of these. Each of these can achieve the target illuminance, but each has a distinctly different appearance and requires different architectural detailing. Such specific details are not enumerated for all tasks. The design team is responsible for determining and addressing indoor and outdoor lighting and energy criteria set forth by Authorities Having Jurisdiction.

Single copy price: \$25.00

Order from and send comments to: Patricia McGillicuddy, pmcgillicuddy@ies.org

BSR/IES RP-31-202x, Recommended Practice: Economic Analysis of Lighting (new standard)

This Recommended Practice (RP) will help answer many types of lighting economic questions. It provides a framework for selecting from a group of competing lighting designs. It gives insight into the question of when a system under consideration will “pay off.” It can help the lighting professional make energy conservation decisions. Most importantly, it provides methods for gauging the profitability of a capital investment in a lighting system, which can be objectively compared to other competing capital investments. This RP begins with a discussion of the second-level methods, concentrating on LCCBA. This is followed by sections on sensitivity analysis and benefit analysis. Finally, because the lighting practitioner is likely to encounter the first-level methods in practice, these are also covered. In discussing the first-level methods, emphasis is placed on their shortcomings so that the lighting professional can understand why their use is not encouraged.

Single copy price: \$25.00

Order from and send comments to: Patricia McGillicuddy, pmcgillicuddy@ies.org

BSR/IES RP-42-202x, Recommended Practice: Dimming and Control Method Designations (new standard)

This Recommended Practice provides simple standard designations for open non-proprietary dimming and control methods and protocols for luminaires (including standalone lamps) and controllers. This document does not address the internal control techniques within a luminaire, although the designations may be applicable. Inclusion of dimming methods and control protocol designations in design and construction documents—especially luminaire and control schedules—provides clarity in selection of compatible dimming and control equipment. Manufacturers of luminaires, drivers, controllers, and lamps are encouraged to use these same designations to clearly identify dimming methods that are compatible with their products in data sheets.

Single copy price: \$25.00

Order from and send comments to: Patricia McGillicuddy, pmcgillicuddy@ies.org

BSR/IES TM-26-202x, Technical Memorandum: Projecting Catastrophic Failure Rate of LED Packages (new standard)

This document describes three methodologies for projecting the catastrophic failure rate of LED packages. This document applies to the LED packages that are defined in ANSI/IES RP-16-17, Nomenclature and Definitions for Illuminating Engineering (see Section 2.1). The three methodologies presented are for information only and do not represent a complete set of methodologies in existence; these represent the methodologies that are publicly

available, and have been made available, for publication by the IES. The IES does not endorse any of these specific methods, and it is not the intent of this TM to incorporate them into any standards publication.

Single copy price: \$25.00

Order from and send comments to: Patricia McGillicuddy, pmcgillicuddy@ies.org

BSR/IES TM-28-202x, Technical Memorandum: Projecting Long-Term Luminous Flux Maintenance of LED Lamps and Luminaires (new standard)

This document recommends the methods for projecting long-term luminous flux maintenance of LED lamps and luminaires using data obtained when testing them per IES LM-84-14, Approved Method for Measuring Lumen and Color Maintenance of LED Lamps, Light Engines, and Luminaires, as well as data when testing LED sources per IES LM-80-08, Approved Method for Measuring Lumen and Color Maintenance of LED Light Sources.

Single copy price: \$25.00

Order from and send comments to: Patricia McGillicuddy, pmcgillicuddy@ies.org

BSR/IES RP-3-202x, Recommended Practice: Lighting Educational Facilities (revision of ANSI/IESNA RP-3-2013)

This Recommended Practice was developed to enable architects, engineers, lighting designers, and other lighting decision makers to ensure that their lighting criteria are consistent with good current practice; to assist school and university staff in understanding the importance of the role that lighting plays in educational environments; and to facilitate conversations about lighting between school and university staff, architects, engineers, lighting designers, and other designers. It addresses all levels, from preschool to university facilities.

Single copy price: \$25.00

Order from and send comments to: Patricia McGillicuddy, pmcgillicuddy@ies.org

BSR/IES RP-27-202x, Recommended Practice: Photobiological Safety for Lighting Systems (revision, redesignation and consolidation of ANSI/IESNA RP-27.1-2015, ANSI/IESNA RP-27.2-2000 (R2010), and ANSI/IES RP-27.3-2017)

This Recommended Practice covers the classification, labeling, and informational requirements for lamps that emit optical radiation in the wavelength range from 200 nm to 3000 nm, with exception for LEDs used in optical fiber communication systems and for lasers. Lamps included are incandescent filament lamps including tungsten-halogen types and incandescent heating sources, low-pressure discharge lamps, high-intensity discharge (HID) lamps, short-arc lamps, carbon arcs, electroluminescent lamps, LEDs, organic LEDs (OLEDs), and laser-driven broadband sources. For the purposes of this document, induction lighting is classified under fluorescent lamps and plasma lighting is classified under HID lamps.

Single copy price: \$25.00

Order from and send comments to: Patricia McGillicuddy, pmcgillicuddy@ies.org

BSR/IES/ALA RP-11-202x, Lighting for Interior and Exterior Residential Environments (revision of ANSI/IES/ALA RP-11-2017)

This Recommended Practice is a guide for designing and for teaching lighting. It covers residential living spaces and other areas intended to impart a residential atmosphere. It describes design objectives, criteria for quantity and quality of illuminance, lighting methods, types and uses of equipment, energy use, and electrical code considerations. Various solutions that address residential lighting problems are also presented.

Single copy price: \$25.00

Order from and send comments to: Patricia McGillicuddy, pmcgillicuddy@ies.org

BSR/IICRC S220-202x, Standard for Professional Inspection of Hard Surface Floor Coverings (new standard)

This standard describes the procedures, methods, and systems for professional inspectors to follow when inspecting light commercial and residential hard surface floor coverings; including stone, laminate, pre-finished wood, ceramic, and resilient. This standard does not specifically address the protocols and procedures for installing hard-surface floor coverings.

Single copy price: Free

Access and offer comments at: <https://www.iicrc.org/page/SBSRIICRCS220>

Due 27 April 2020

BSR/AAMI HE75-202x, Human factors engineering - Design of medical devices (revision of ANSI/AAMI HE75-2009 (R2018))

The purpose of this document is to provide a relevant source of human factors engineering information, design criteria, and guidelines for medical devices. The human factors design information and methodologies described in the document can be used during every phase of device design and development, from initial conceptualization through post-market surveillance.

Single copy price: Free

Order from and send comments to: pbernat@aami.org

BSR/AAMI PB70-202x, Liquid barrier performance and classification of protective apparel and drapes intended for use in health care facilities (revision of ANSI/AAMI PB70-2012)

Establishes minimum barrier performance requirements, a classification system, and associated labeling requirements for protective apparel, surgical drapes, and drape accessories intended for use in health care facilities.

Single copy price: Free

Order from and send comments to: abenedict@aami.org

BSR/ASIS WVPI AA-202x, Workplace Violence and Active Assailant - Prevention, Intervention, and Response (revision and redesignation of ANSI ASIS/SHRM WVPI.1-2011)

This standard provides an overview of policies, processes, and protocols that organizations can adopt to help prevent threatening behavior and violence affecting the workplace and better respond to and resolve security incidents. Standard describes the implementation of a workplace violence prevention and intervention program, and protocols for effective incident management and resolution. Standard also includes an annex on active assailants which provides actionable information and guidance relative to prevention, intervention and response to incidents involving an active assailant/active shooter.

Single copy price: \$50.00

Order from and offer comments to: standards@asisonline.org

BSR C82.77-9-202x, Standard for Lighting Equipment Injected Currents (national adoption with modifications of IEC 61000-4-6 Edition 4 2013-10)

This standard is a Nationally Acknowledged International Standard (NAIS) of IEC 61000-4-6 with regional deviations.

Single copy price: \$50.00

Order from and send comments to: Michael Erbesfeld, Michael.Erbesfeld@nema.org

BSR C82.77-1-202x, Standard for Lighting Equipment - Electromagnetic Compatibility (EMC) - General Requirements and Criteria (new standard)

This standard defines the Electromagnetic Compatibility "EMC" (immunity and interference) performance levels, testing methods, and performance criteria for lighting products in a frequency range from 0 to 400 GHz. This standard applies to lighting products intended to be directly connected to the mains (up to 600 V), dc (up to 250 Vdc), battery operated, or to a non-public, low-voltage power distribution system.

Single copy price: \$50.00

Order from and send comments to: Michael Erbesfeld, Michael.Erbesfeld@nema.org

Due 4 May 2020

BSR/ASA S1.15-1997/Part 1 (R202x), Measurement Microphones - Part 1: Specifications for Laboratory Standard Microphones (reaffirmation of ANSI/ASA S1.15-1997/Part 1 (R2016))

This Part 1:

— specifies mechanical dimensions and certain electroacoustic characteristics for condenser microphones used as laboratory standards for sound pressure measurements of the highest attainable accuracy. The specifications are intended to ensure that primary calibration by the reciprocity method can be readily carried out for the purpose of traceability to national standards;

— establishes a system for classifying laboratory standard condenser microphones into a number of types according to their dimensions and properties in order to facilitate the specification of calibration methods, the

conduct of inter-laboratory comparisons involving the calibration of the same microphones in different laboratories, and the interchangeability of microphones in a given calibration system.

Single copy price: \$138.60

Order from and send comments to: Nancy Blair-DeLeon, asastds@acousticalsociety.org

BSR/ASA S1.16-2000 (R202x), Method for Measuring the Performance of Noise Discriminating and Noise Canceling Microphones (reaffirmation of ANSI/ASA S1.16-2000 (R2015))

This Standard specifies the laboratory physical measurement procedure, calculation, and results reporting for quantifying the performance of noise-canceling and noise-discriminating microphones in a diffuse noise field. The purpose of this Standard is to describe procedures designed to measure the noise canceling performance of noise canceling and noise discrimination microphones in a diffuse sound field. This method provides a measure of merit, the Noise Canceling Index, which can be used to quantify the overall performance of a microphone in canceling or discriminating noise when compared to a laboratory-quality pressure microphone, meeting the requirements of ANSI S1.12-1967 (R1997).

Single copy price: \$126.00

Order from and send comments to: Nancy Blair-DeLeon, asastds@acousticalsociety.org

BSR/ASA S1.25-1991 (R202x), Specification for Personal Noise Dosimeters (reaffirmation of ANSI/ASA S1.25-1991 (R2017))

This standard specifies certain characteristics of a personal noise dosimeter. It also specifies allowable tolerances of those characteristics, and it describes how those characteristics are to be verified. It provides for three different exchange rates, two frequency weightings, and two exponential averaging time constants. NOTE: At present, the regulatory practices of the U.S. Department of Labor Occupational Safety and Health Administration (OSHA) specify use of dosimeters having A-weighting, 5-dB exchange rate and SLOW exponential time averaging. The U.S. Department of Defense practices specify A-weighting, 4-dB exchange rate and SLOW exponential time averaging. Other options, including C-weighting, 3-dB exchange rate and FAST exponential time averaging, are included to provide instrument standards to serve the needs of research and developing regulatory practices. International Organization for Standardization Standard 1999: 1990 for occupational noise specifies only A-weighted sound exposure with 3-dB exchange rate and with no exponential time averaging. This standard is intended to specify a dosimeter suitable for measurement of impulsive, intermittent, and continuous noise.

Single copy price: \$140.00

Order from and send comments to: Nancy Blair-DeLeon, asastds@acousticalsociety.org

BSR/ASA S1.40-2006 (R202x), Specifications and Verification Procedures for Sound Calibrators (reaffirmation of ANSI/ASA S1.40-2006 (R2016))

Sound calibrators generate known sound pressure levels at one or more frequencies in a coupler into which a specified model of microphone is inserted in a specified configuration. This standard specifies performance requirements and verification procedures for three classes of coupler-type sound calibrators:

- Class LS: Laboratory Standard calibrator with the smallest tolerance limits;
- Class 1: Sound calibrators that are generally intended for field use with class 1 sound-level meters and similar instruments;
- Class 2: Sound calibrators that are generally intended for field use with class 2 sound-level meters, dosimeters, and similar instruments.

For class LS calibrators, the standard requires the use of a laboratory-standard microphone as specified in ANSI S1.15-1997/Part 1. For class 1 and class 2 calibrators, the standard requires the use of a working standard microphone as specified in IEC 61094-4:1995. Tolerance limits in this standard include maximum permitted expanded uncertainties of measurement as well as the tolerance limits allowed for design and manufacturing.

Single copy price: \$231.00

Order from and send comments to: Nancy Blair-DeLeon, asastds@acousticalsociety.org

BSR/ASHRAE/ICC/USGBC/IES Addendum bk to BSR/ASHRAE/ICC/USGBC/IES Standard 189.1-202x, Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/ICC/USGBC/IES Standard 189.1-2017)

Addendum bk to 189.1-2017 updates the envelope criteria in Informative Appendix E based on changes to fenestration requirements that occurred in ANSI/ASHRAE/IES Standard 90.1-2019. In accordance with Section

7.4.2.1, Appendix E is calculated by reducing Standard 90.1 requirements for U-factor by 5% for vertical fenestration and skylights. The same is true for calculating the solar heat gain coefficient (SHGC) for skylights and east- and west-oriented vertical fenestration, unless otherwise noted. There are no changes to the opaque envelope requirements.

Single copy price: \$35.00

Obtain an electronic copy from: standards.section@ashrae.org

Send comments to: <http://www.ashrae.org/standards-research--technology/public-review-drafts>

BSR/ASHRAE/IES Addendum av to BSR/ASHRAE/IES Standard 90.1-202x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2016)

This ISC to addendum av introduces requirements to address thermal bridges in this standard. The contents of this proposal include prescriptive and performance (e.g., modeling thermal transmission values) options. The goal is to provide users with as many options as are currently available and allow users to choose which method of evaluation (e.g., simple or complex) that may be in the best interest of the building owner or building project without sacrificing the existing stringency.

Single copy price: \$35.00

Obtain an electronic copy from: standards.section@ashrae.org

Send comments to: <http://www.ashrae.org/standards-research--technology/public-review-drafts>

BSR/ASQ ID1-202x, Inspection techniques and requirements - Guidelines (new standard)

Pertains to the inspections and tests necessary to substantiate conformity to drawings, specifications, and contractual requirements as well as all inspection and tests required by regulatory/statutory requirements.

Single copy price: \$86.00

Order from and offer comments to: standards@asq.org

Due 6 May 2020

BSR/NFPA 241-202x, Standard for Safeguarding Construction, Alteration, and Demolition Operations (revision of ANSI/NFPA 241-2019)

This standard shall apply to structures in the course of construction, alteration, or demolition, including those in underground locations. General requirements applying to construction and demolition are contained in Chapter 1 and Chapters 3 through 7; specific requirements for construction and alteration activities are found in Chapter 8; those requirements specific to roofing operations are covered in Chapter 9; those requirements specific to demolition activities are covered in Chapter 10; and specific requirements for activities in underground locations are contained in Chapter 11.

Access and offer comments at: www.nfpa.org/241Next

BSR/NFPA 484-202x, Standard for Combustible Metals (revision of ANSI/NFPA 484-2019)

This standard shall apply to the production, processing, finishing, handling, recycling, storage, and use of all metals and alloys that are in a form that is capable of combustion or explosion. Under proper conditions, most metals in the elemental form will react with oxygen to form an oxide. These reactions are exothermic. The conditions of the exposure are affected by the temperature of the metal (whether it is in large pieces or in the form of small particles), the ratio of its surface area to its total weight, the extent or presence of an oxide coating, the temperature of the surrounding atmosphere, the oxygen content of the atmosphere, the moisture content of the atmosphere, and the presence of flammable vapors. The procedures in Chapter 4 shall be used to determine whether a metal is in a noncombustible form. This standard also shall apply to operations where metal or metal alloys are subjected to processing or finishing operations that produce combustible powder or dust.

Access and offer comments at: www.nfpa.org/484Next

BSR/NFPA 652-202x, Standard on the Fundamentals of Combustible Dust (revision of ANSI/NFPA 652-2019)

This standard shall provide the basic principles of and requirements for identifying and managing the fire and explosion hazards of combustible dusts and particulate solids.

Access and offer comments at: www.nfpa.org/652Next

BSR/NFPA 13-202x, Standard for the Installation of Sprinkler Systems (revision of ANSI/NFPA 13-2019)

This standard provides a range of sprinkler system approaches, design development alternatives, and component options that are all acceptable. Building owners and their designated representatives are advised to carefully evaluate proposed selections for appropriateness and preference. This standard shall provide the minimum requirements for the design and installation of automatic fire sprinkler systems and exposure protection sprinkler systems covered within this standard. This standard shall not provide requirements for the design or installation of water-mist fire protection systems, which are not considered fire sprinkler systems and are addressed by NFPA 750. This standard is written with the assumption that the sprinkler system shall be designed to protect against a single fire originating within the building. This standard also provides guidance for the installation of systems for exterior protection and specific hazards. Where these systems are installed, they are designed for protection from a single ignition source.

Access and offer comments at: www.nfpa.org/13Next

BSR/NFPA 72-202x, National Fire Alarm and Signaling Code (revision of ANSI/NFPA 72-2019)

NFPA 72 covers the application, installation, location, performance, inspection, testing, and maintenance of fire alarm systems, supervising station alarm systems, public emergency alarm reporting systems, fire warning equipment and emergency communications systems (ECS), and their components.

Access and offer comments at: www.nfpa.org/72Next

BSR/NFPA 80-202x, Standard for Fire Doors and Other Opening Protectives (revision of ANSI/NFPA 80-2019)

This standard regulates the installation and maintenance of assemblies and devices used to protect openings in walls, floors, and ceilings against the spread of fire and smoke within, into, or out of buildings. With the exception of fabric fire-safety curtain assemblies, this standard addresses assemblies that have been subjected to standardized fire tests. No fire-test standard requirement currently exists to which fabric fire-safety curtain assemblies can be tested. Only the curtain fabric is tested in accordance with ASTM E119, Standard Test Methods for Fire Tests of Building Construction and Materials. The perimeter and internal framework and all supporting, guide, and operating components used in specific applications are not tested. Variations in size of proscenium openings and the amount of side and head clearances available for individual stages dictate the number of variations in design of the assemblies. Incinerator doors, record room doors, and vault doors are not covered in this standard.

Access and offer comments at: www.nfpa.org/80Next

BSR/NFPA 105-202x, Standard for Smoke Door Assemblies and Other Opening Protectives (revision of ANSI/NFPA 105-2019)

This standard shall prescribe minimum requirements for smoke door assemblies for use in providing safety to life and protection of property from smoke.

Access and offer comments at: www.nfpa.org/105Next

New ANS projects

ANSI has announced the following new projects that might materially affect *Standards Watch* readers—or at least be interesting to them. Contact the developer if you (a) want to be involved in the project, (b) object to the project and wish it to be abandoned, or (c) if you would like to point out that its scope is covered by an existing standard, thereby possibly making the project redundant or conflicting.

BSR/ASCE/CI 71-202x, Identifying, Quantifying, and Proving Loss of Productivity (new standard)

There is a need to establish standards for the reliable identification and quantification of productivity loss, followed by the determination of causation and liability for that productivity loss. Managing labor productivity is a crucial component of project success. Because labor costs are typically the most variable and a major component of overall project cost, tracking and measuring labor productivity is helpful in preventing, mitigating, and recovering cost overruns. The numerous published treatises and studies on loss of productivity in the construction industry highlight its importance. Despite that importance, there are inconsistencies in the methodologies used to identify, quantify, and determine causation and liability for labor productivity losses.

Contact: James Neckel, jneckel@asce.org

BSR C18.3M, Part 1-202x, Portable Lithium Primary Cells and Batteries -General and Specifications

(revision of ANSI C18.3M, Part 1-2019)

This standard applies to portable lithium primary cells and batteries. This edition includes the following electrochemical systems:

(a) Lithium/carbon monofluoride, (b) Lithium/manganese dioxide, and (c) Lithium/iron disulfide.

Contact: Khaled Masri, Khaled.Masri@nema.org

BSR/LES IPSC.001.1-202x, Management System for the Protection of Intellectual Property in the Supply Chain – Requirements (new standard)

The Management System for the Protection of Intellectual Property in the Supply Chain – Requirements draft standard defines a common set of expectations for what organizations can and should do to protect all types of their own IP and the IP of customers, suppliers, and partners. The committee's vision is to achieve standardization around how organizations develop and implement an intellectual property protection management system. This standard seeks to supplement legal and contractual IP protection methods through performance standards and business processes and practices that define the management systems required to protect all types of intellectual property (IP) in the global supply chain. The LES Standards Development Organization encourages IP thought leaders around the globe to participate in the public review and comment of LES draft standards as part of the standardization development process.

Contact: Brian O'Shaughnessy, Brian.OShaughnessy@dinsmore.com

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/ASHRAE/ICC/USGBC/IES Addendum an to ANSI/ASHRAE/USGBC/IES Standard 189.1-2017,

Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/USGBC/IES Standard 189.1-2017): 2 March 2020

ANSI/ASHRAE/ICC/USGBC/IES Addendum j to ANSI/ASHRAE/ICC/USGBC/IES Standard 189.1-2017,

Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/USGBC/IES Standard 189.1-2017): 2 March 2020

ANSI/ASHRAE/ICC/USGBC/IES Addendum u to ANSI/ASHRAE/ICC/USGBC/IES Standard 189.1-2017,

Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/ICC/USGBC/IES Standard 189.1-2017): 2 March 2020

ANSI/IES LP-8-2020, Lighting Practice: The Commissioning Process Applied to Lighting and Control Systems (new standard): 13 March 2020

ANSI/IES LS-4-2020, Lighting Science: Measurement of Light: The Science of Photometry (new standard): 13 March 2020

ANSI/UL 62133-1-2020, Standard for Safety for Secondary Cells and Batteries Containing Alkaline or Other Non-Acid Electrolytes - Safety Requirements for Portable Sealed Secondary Cells, and for Batteries Made from Them, for Use in Portable Applications - Part 1: Nickel Systems (national adoption with modifications of IEC 62133-1): 10 January 2020

ANSI/UL 62133-2-2020, Standard for Safety for Secondary Cells and Batteries Containing Alkaline or Other Non-Acid Electrolytes - Safety Requirements for Portable Sealed Secondary Cells, and for Batteries Made from Them, for Use in Portable Applications - Part 2: Lithium Systems (national adoption with modifications of IEC 62133-2): 10 January 2020

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. Comments from US citizens on ISO documents should be sent to Karen Hughes at isot@ansi.org. Any prices, if shown, are for purchases through ANSI. The sort order is by due date then alphanumeric.

34C/1488/FDIS, IEC 62384 ED2: DC or AC supplied electronic control gear for LED modules - Performance requirements, 17 April 2020

35/1445/DISH, IEC 60086-4/ISH1 ED5: Interpretation Sheet 1 - Primary batteries - Part 4: Safety of lithium batteries, 17 April 2020

44/873/CD, IEC 60204-1/AMD1 ED6: Amendment 1 - Safety of machinery - Electrical equipment of machines - Part 1: General requirements, 1 May 2020

110/1193A/CD, IEC TR 62977-5-2 ED1: Electronic displays - Part 5-2: Visual assessment - Visual assessment based on colour discrimination according to viewing direction, 8 May 2020

JTC1-SC41/149/FDIS, ISO/IEC 30142 ED1: Internet of Things (IoT) - Underwater acoustic sensor network (UWASN) – Network management system overview and requirements, 8 May 2020

JTC1-SC41/150/FDIS, ISO/IEC 30143 ED1: Internet of Things (IoT) - Underwater acoustic sensor network (UWASN) – Application profiles, 8 May 2020

65C/996/CDV, IEC 61784-3-X ED4: Industrial communication networks - Profiles - Part 3-X: Functional safety fieldbuses – Additional specifications for CPF X, 19 May 2020

65C/997/CDV, IEC 62439-2 ED3: Industrial communication networks - High availability automation networks - Part 2: Media Redundancy Protocol (MRP), 19 May 2020

65C/998/CDV, IEC 62439-3 ED4: Industrial communication networks - High availability automation networks - Part 3: Parallel Redundancy Protocol (PRP) and High-availability Seamless Redundancy (HSR), 19 May 2020

21A/722/CDV, IEC 62619 ED2: Secondary cells and batteries containing alkaline or other non-acid electrolytes – Safety requirements for secondary lithium cells and batteries, for use in industrial applications, 22 May 2020

21A/724/CDV, IEC 63218 ED1: Secondary cells and batteries containing alkaline and other non-acid electrolyte – Secondary Lithium ion, Nickel Cadmium, and Nickel Metal Hydride cells and batteries for portable applications - Guidance on environmental aspects, 22 May 2020

ISO/DIS 17779, Brazing - Specification and qualification of brazing procedures for metallic materials, 23 May 2020, \$77.00

ISO/DIS 13585, Brazing - Qualification test of brazers and brazing operators, 24 May 2020, \$82.00

CIS//636/CDV, CISPR 35 ED2: Electromagnetic compatibility of multimedia equipment - Immunity requirements, 5 June 2020

JTC1-SC41/135/CDV, ISO/IEC 30161 ED1: Internet of Things (IoT) - Requirements of IoT data exchange platform for various IoT services, 5 June 2020

JTC1-SC41/148/NP, PNW JTC1-SC41-148: Internet of things (IoT) - IoT applications for electronic label system (ELS), 5 June 2020

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](#).

IEC 61158-1 Ed. 2.0 b:2019, Industrial communication networks - Fieldbus specifications - Part 1: Overview and guidance for the IEC 61158 and IEC 61784 series, \$352.00

ISO 7240-3:2020, Fire detection and alarm systems - Part 3: Audible alarm devices, \$185.00

ISO 13824:2020, Bases for design of structures - General principles on risk assessment of systems involving structures, \$209.00

ISO 21406:2020, Tourism and related services - Yacht harbours - Essential requirements for luxury harbours, \$138.00

ISO 23386:2020, Building information modelling and other digital processes used in construction - Methodology to describe, author and maintain properties in interconnected data dictionaries, \$185.00

ISO 24552:2020, Ergonomics - Accessible design - Accessibility of information presented on visual displays of small consumer products, \$68.00

ISO 37161:2020, Smart community infrastructures - Guidance on smart transportation for energy saving in transportation services, \$103.00

ISO 80000-8:2020, Quantities and units - Part 8: Acoustics, \$68.00

ISO/IEC 23009-5/Amd1:2020, Information technology – Dynamic adaptive streaming over HTTP (DASH) - Part 5: Server and network assisted DASH (SAND) - Amendment 1: Improvements on SAND messages, \$19.00

ISO/IEC/IEEE 8802-1AC/Cor1:2020, Information technology - Telecommunications and information exchange between systems - Local and metropolitan area networks - Part 1AC: Media access control (MAC) service definition - Technical Corrigendum 1: Logical Link Control (LLC) Encapsulation EtherType, FREE

ISO/TS 21054:2020, Ergonomics - Accessible design - Controls of consumer products, \$68.00

TSP meeting schedule

All the following meetings will be via WebEx. The times listed are Central Daylight Time.

Control Protocols E1.37-2 IPv4/v6 PIDs	14:00 – 18:00 CDT	Friday 3 April 2020
Control Protocols E1.59 Automation Feedback TG	14:00 – 18:00 CDT	Thursday 2 April 2020
Control Protocols E1.68 Compliance TG	19:00 – 23:00 CDT	Thursday 2 April 2020
Control Protocols Next Gen Overall CG	10:00 – 13:00 CDT	Friday 3 April 2020
Control Protocols NextGen Fixture	09:00 – noon CDT	Saturday 4 April 2020
Control Protocols Working Group	09:00 – noon CDT	Thursday 2 April 2020
Electrical Power Electrical Inspection TG	14:00 – 18:00 CDT	Wednesday 1 April 2020
Electrical Power Working Group	10:00 – 13:00 CDT	Wednesday 1 April 2020
Event Safety Fire Safety TG	14:00 – 17:00 CDT	Friday 3 April 2020
Event Safety Rigging Task Group	13:00 – 17:00 CDT	Friday 3 April 2020
Event Safety Security TG	11:00 – 13:00 CDT	Thursday 2 April 2020
Event Safety Task Group Leader Coordination Meeting	17:00 – 18:00 CDT	Friday 3 April 2020
Event Safety Working Group	13:00 – 16:00 CDT	Saturday 4 April 2020
Floors Working Group	14:00 – 17:00 CDT	Wednesday 1 April 2020
Photometrics Working Group	09:00 – noon CDT	Saturday 4 April 2020
Rigging E1.67 TG	09:00 – noon CDT	Friday 3 April 2020
Rigging Working Group	19:00 – 23:00 CDT	Thursday 2 April 2020
Stage Machinery Working Group	13:00 – 17:00 CDT	Thursday 2 April 2020
Technical Standards Council	15:00 – 18:00 CDT	Friday 3 April 2020

The most current schedule for meetings is always available at <https://esta.org/ESTA/meetings.php>.

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 © ESTA.

Editors:

Karl G. Ruling, Technical Standards Manager
Entertainment Services and Technology Association
630 Ninth Avenue, Suite 609
New York, NY 10036 USA
karl.ruling@esta.org
1 212 244 1505 ext. 703

Richard Nix, Asst. Technical Standards Manager
Entertainment Services and Technology Association
630 Ninth Avenue, Suite 609
New York, NY 10036 USA
richard.nix@esta.org
1 212 244 1505 ext. 649

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

About the Stage
Actors' Equity Association
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
Golden Sea Professional Equipment Limited
H & H Specialties
Harlequin Floors
High Output
Neil Huff
Hughston Engineering
IATSE Local 891
InCord
Beverly and Tom Inglesby
Interactive Technologies
InterAmerica Stage
iWeiss Inc.
J.R. Clancy
Jules Lauve
Brian Lawlor
Lex Products
Link USA, Inc.
Lycian Stage Lighting
John T. McGraw
McLaren Engineering Group
Mike Garl Consulting
Mike Wood Consulting
Morpheus Lights
NAMM
Niscon
Oasis Stage Werks
Reed Rigging
Reliable Design Services
Robe
Rosco Laboratories
Rose Brand
Alan M. Rowe
Sapsis Rigging
Stage Equipment & Lighting
Stage Rigging
Stagemaker
Stageworks
Syracuse Scenery and Stage Lighting, Co.
Dana Taylor
Steve Terry
Texas Scenic Company
Theatre Projects Consultants
Theatre Safety Programs
TMB
Tyler Truss Systems
Vertigo
Vincent Lighting Systems
Steve Walker & Associates
Walt Disney Parks and Resorts
Westview Productions
WNP Services, Inc.

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)

Chauvet Professional

Cisco

Columbus McKinnon Entertainment Technology

Robe

Disney Parks Live Entertainment

VISIONARY (\$5,000 & up; 20–100 employees/members)

Altman Lighting, Inc.

German Light Products

JR Clancy

McLaren Engineering Group

Rose Brand

Stage Rigging

Theatre Projects

TMB

VISIONARY (\$500 & up; <20 employees/members)

About the Stage

B-Hive Industries, Inc.

Scott Blair

Boston Illumination Group

Louis Bradfield

Candela Controls, Inc.

Clark Reder Engineering

Tracey Cosgrove & Mark McKinney

Cyclops Lighting

Doug Fleenor Design

EGI Event Production Services

Entertainment Project Services

Neil Huff

Interactive Technologies

Jules Lauve

Brian Lawlor

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.

Stageworks

Dana Taylor

Steve Terry

Theatre Safety Programs

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.

Lighting Infusion LLC

Nanyi Audio & Lighting Enterprise Co., Ltd.

Qdot Lighting Ltd.

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
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
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
Showman Systems
Michael Skinner
Stuido T+L
Stephen Vanciel
Arjan van Vught

Extraordinary legacy gift: Ken Vannice