

Occupational Safety and Health Standards Board

Public Meeting, Public Hearing and
Business Meeting

April 21, 2022

Oakland, CA

Board Meeting Packet

Occupational Safety and Health Standards Board

Meeting Agenda

DEPARTMENT OF INDUSTRIAL RELATIONS
Occupational Safety and Health Standards Board
2520 Venture Oaks Way, Suite 350
Sacramento, CA 95833
Tel: (916) 274-5721 Fax: (916) 274-5743
www.dir.ca.gov/oshsb



MISSION STATEMENT

The mission of the Occupational Safety and Health Standards Board is to promote, adopt, and maintain reasonable and enforceable standards that will ensure a safe and healthful workplace for California workers.

AGENDA

PUBLIC MEETING, PUBLIC HEARING AND BUSINESS MEETING
OF THE OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

April 21, 2022 at 10:00 a.m.

Attend the meeting in person:

Harris State Building
Auditorium
1515 Clay Street
Oakland, CA 94612

Attend the meeting via Video-conference:

1. Go to www.webex.com
2. Select "Join"
3. Enter the meeting information: **268 984 996**
4. Enter your name and email address then click "Join Meeting"
5. Video-conference will be opened to the public at 9:50 a.m.

Attend the meeting via Teleconference:

1. Dial (844) 992-4726
2. When prompted, enter **268-984-996**
3. When prompted for an Attendee ID, press #
4. Teleconference will be opened to the public at 9:50 a.m.

Live video stream and audio stream (English and Spanish):

1. Go to <https://videobookcase.com/california/oshsb/>
2. Video stream and audio stream will launch as the meeting starts at 10:00 a.m.

Public Comment Queue:

Those attending the meeting remotely who wish to comment on agenda items may submit a request to be added to the public comment queue either in advance of or during the meeting through one of the following methods:

ONLINE: Provide your information through the online comment queue portal at <https://videobookcase.org/oshsb/public-comment-queue-form/>

PHONE: Call **510-868-2730** to access the automated comment queue voicemail and provide*: 1) your name as you would like it listed; 2) your affiliation or organization; and 3) the topic you would like to comment on.

**Information requested is voluntary and not required to address the Board.*

I. **CALL TO ORDER AND INTRODUCTIONS**

II. **PUBLIC MEETING (Open for Public Comment)**

This portion of the Public Meeting is open to any interested person to propose new or revised standards to the Board or to make any comment concerning occupational safety and health (Labor Code section 142.2). *The Board is not permitted to take action on items that are not on the noticed agenda, but may refer items to staff for future consideration.*

This portion of the meeting is also open to any person who wishes to address the Board on any item on today's Business Meeting Agenda (Government Code (GC) section 11125.7).

Any individual or group wishing to make a presentation during the Public Meeting is requested to contact Sarah Money, Executive Assistant, at (916) 274-5721 in advance of the meeting so that any logistical concerns can be addressed.

A. PUBLIC COMMENT

B. ADJOURNMENT OF THE PUBLIC MEETING

III. **PUBLIC HEARING**

A. EXPLANATION OF PROCEDURES

B. PROPOSED SAFETY ORDERS (Revisions, Additions, Deletions)

1. **TITLE 8:**
 - CONSTRUCTION SAFETY ORDERS**
Section 1512
 - GENERAL INDUSTRY SAFETY ORDERS**
Section 3400
 - [First Aid](#)

IV. **BUSINESS MEETING – All matters on this Business Meeting agenda are subject to such discussion and action as the Board determines to be appropriate.**

The purpose of the Business Meeting is for the Board to conduct its monthly business.

- A. PROPOSED SAFETY ORDER FOR ADOPTION
 - 1. TITLE 8: **GENERAL INDUSTRY SAFETY ORDERS**
Article 10.1, section 3401, section 3402,
new sections 3402.1 - 3402.3,
sections 3403 - 3410, new section 3410.1, and section 3411
[Fire Fighters' Personal Protective Clothing and Equipment –
AB 2146 \(2014\)](#)

- B. PROPOSED EMERGENCY SAFETY ORDER FOR RE-ADOPTION (GC SECTION 11346.1;
EO N-23-21)
 - 1. TITLE 8: **GENERAL INDUSTRY SAFETY ORDERS**
Chapter 4, subchapter 7, new sections 3205, 3205.1, 3205.2,
3205.3, and 3205.4
[COVID-19 Prevention](#)

- C. PROPOSED PETITION DECISION FOR ADOPTION
 - 1. Greg McClelland
[Petition File No. 594](#)

Petitioner requests to amend title 8, General Industry Safety Orders, section 3203(a) to include procedures to implement applicable, published California Department of Public Health (CDPH) guidelines following a declaration of a state of emergency and an executive order directing CDPH to publish workplace guidance to mitigate “aerosol transmissible pathogen” spread in the workplace.

- D. PROPOSED VARIANCE DECISIONS FOR ADOPTION
 - 1. [Consent Calendar](#)

- E. REPORTS
 - 1. Division Update
 - 2. Legislative Update
 - 3. Executive Officer’s Report

- F. NEW BUSINESS
 - 1. Future Agenda Items

Although any Board Member may identify a topic of interest, the Board may not substantially discuss or take action on any matter raised during the meeting that is not included on this agenda, except to decide to place the matter on the agenda of a future meeting. (GC sections 11125 & 11125.7(a).).

G. CLOSED SESSION

Matters on Appeal

1. 22-V-023T Building Zone Industries, Inc. (BZI)
2. 22-V054T Operating Engineers Local 3, District 80

Matters Pending Litigation

1. Western States Petroleum Association (WSPA) v. California Occupational Safety and Health Standards Board (OSHSB), et al. United States District Court (Eastern District of California) Case No. 2:19-CV-01270
2. WSPA v. OSHSB, et al., County of Sacramento, CA Superior Court Case No. 34-2019-00260210
3. Western Growers Association, California Farm Bureau Federation, et. al. v OSHSB, et al., County of San Francisco, CA Superior Court Case No. CPF-21-517344

Personnel

H. RETURN TO OPEN SESSION

1. Report from Closed Session

I. ADJOURNMENT OF THE BUSINESS MEETING

Next Meeting: May 19, 2022
Rancho Cordova City Hall
Council Chambers
2729 Prospect Park Drive
Rancho Cordova, CA 95670
10:00 a.m.

CLOSED SESSION

1. If necessary, consideration of personnel matters. (GC section 11126(a)(1)).
2. If necessary, consideration of pending litigation pursuant to GC section 11126(e)(1).

PUBLIC COMMENT

Efforts will be made to accommodate each individual who has signed up to speak. However, given time constraints, there is no guarantee that all who have signed up will be able to address the State body.

Each speaker is invited to speak for up to two minutes. The Board Chair may extend the speaking time allotted where practicable.

The total time for public comment is 120 minutes, unless extended by the Board Chair.

The public can speak/participate at the meetings before items that involve decisions.

In addition to public comment during Public Hearings, the Occupational Safety and Health Standards Board (Board) affords an opportunity to members of the public to address the Board on items of interest that are either on the Business Meeting agenda, or within the Board's jurisdiction but are not on the noticed agenda, during the Public Meeting. The Board is not permitted to take action on items that are not on the noticed agenda, but may refer items to staff for future consideration. The Board reserves the right to limit the time for speakers

DISABILITY ACCOMMODATION NOTICE

Disability accommodation is available upon request. Any person with a disability requiring an accommodation, auxiliary aid or service, or a modification of policies or procedures to ensure effective communication and access to the public hearings/meetings of the Occupational Safety and Health Standards Board should contact the Disability Accommodation Coordinator at (916) 274-5721 or the state-wide Disability Accommodation Coordinator at 1-866-326-1616 (toll free). The state-wide Coordinator can also be reached through the California Relay Service, by dialing 711 or 1-800-735-2929 (TTY) or 1-800-855-3000 (TTY-Spanish).

Accommodations can include modifications of policies or procedures or provision of auxiliary aids or services. Accommodations include, but are not limited to, an Assistive Listening System (ALS), a Computer-Aided Transcription System or Communication Access Realtime Translation (CART), a sign-language interpreter, documents in Braille, large print or on computer disk, and audio cassette recording. Accommodation requests should be made as soon as possible. Requests for an ALS or CART should be made no later than five (5) days before the meeting.

TRANSLATION

Requests for translation services should be made no later than five (5) days before the meeting.

NOTE: Written comments may be emailed directly to oshsb@dir.ca.gov no later than 5:00 p.m. on the Tuesday prior to a scheduled Board Meeting.

Under GC section 11123, subdivision (a), all meetings of a state body are open and public, and all persons are permitted to attend any meeting of a state body, except as otherwise provided in that article. The Board Chair may adopt reasonable time limits for public comments in order to ensure that the purpose of public discussion is carried out. (GC section 11125.7, subd. (b).)

Members of the public who wish to participate in the meeting may do so via livestream on our website at <https://videobookcase.com/california/oshsb/>. The video recording and transcript of this meeting will be posted on our website as soon as practicable.

For questions regarding this meeting, please call (916) 274-5721.

Occupational Safety and Health Standards Board

Public Hearing

First Aid

TITLE 8

**CONSTRUCTION SAFETY ORDERS, SECTION 1512,
GENERAL INDUSTRY SAFETY ORDERS, SECTION 3400**

FIRST AID

HYPERLINKS TO RULEMAKING DOCUMENTS:

[NOTICE/INFORMATIVE DIGEST](#)

[PROPOSED REGULATORY TEXT](#)

[INITIAL STATEMENT OF REASONS](#)

From: [Rangel Melendez](#)
To: [DIR OSHSB](#)
Subject: Comments for GENERAL INDUSTRY SAFETY ORDERS, Section 3400 proposed change
Date: Friday, March 18, 2022 6:49:16 AM

CAUTION: [External Email]

This email originated from outside of our DIR organization. Do not click links or open attachments unless you recognize the sender and know the content is expected and is safe. If in doubt reach out and check with the sender by phone.

Following is my comment submitted for consideration of explanation as it is left to wide interpretation.

Section 3400(b) implies "...near proximity to the workplace..." is to be as near as possible. Not every employer is near an "infirmary, clinic, or hospital" and the distance to them can be an issue of misinterpretation. I have checked in the past with "Consultation" and I have been told in different occasions that it all "depends" on the situation.

We are located within 2 minutes of an Occupational clinic, about 5 to 7 minutes to a hospital and other clinics around the hospital, and the fire department is within 2 to 3 minutes response time. I have been told that those may be too far for some emergencies, yet, if left to interpretation, they are "in the near proximity of the workplace".

I request for the language to be modified to include more specifics regarding how close "near proximity" should be.

Thanks

CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

PROPOSED STATE STANDARD REVISIONS,
TITLE 8, CHAPTER 4, SUBCHAPTER 7,

Amend Section 3400 to read:

§3400. Medical Services and First Aid.

(a) Employer shall ensure the ready availability of medical personnel for advice and consultation on matters of industrial health or injury.

(b) In the absence of an infirmary, clinic, or hospital, **in near proximity to the workplace**, which is used for the treatment of all injured employees, a person or persons shall be adequately trained to render first aid. Training shall be equal to that of the American Red Cross or the Mine Safety and Health Administration.

[Rangel Melendez, MBA, ASO: CQE, CQA, CMQ/OE](#)
[OSHA Cal/OSHA Authorized General Industry Outreach Trainer](#)
Director of Quality, Environmental, Health & Safety, Jain Americas.
[2851 E Florence Ave. - Fresno, CA 93721](#)
Office 559.459.5322 | Fax 559.485.7623
www.JAINSUSA.com



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April 13, 2022

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Kathryn Cahill Thompson

Lawrence Walters
Founding President

Philip Mirenda
Director Emeritus

Mr. David Thomas, Board Chair
Occupational Safety & Health Standards Board
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833

RE: Proposed Changes to CCR Section 1512, Emergency Medical Services

Dear Mr. Thomas:

The Construction Employers' Association (CEA) represents most of the largest unionized commercial building contractors in northern California. Our membership base collectively performs in excess of \$20 billion in public and private construction volume annually in California. CEA members are strong proponents of jobsite safety and take their responsibility to provide a safe and healthful workplace very seriously.

Thank you for the opportunity to provide comments regarding the proposed changes to CCR Section 1512 regarding first-aid kits.

Presently, CCR Section 1512 (c)(1) specifies that the minimum supplies for a first-aid kit shall be determined by an employer-authorized, licensed physician or in accordance with the prescribed Table. Section 1512 (c)(2) further requires that other supplies or equipment, when provided, shall be based on the documented recommendation of an employer authorized, licensed physician.

Due to the risks posed by heat illness or cuts to workers in the construction industry, the rationale for requiring a doctor's authorization to add instant cold compresses, hand sanitizer or even knuckle bandages, all common first-aid supplies, but not included in the Table, is confusing and inconsistent with CCR Section 3400(c)(3)(B), the first-aid kit requirements for general industry. Furthermore, CCR Sections 6251 regarding first-aid for logging and sawmills, as well as CCR Section 3439 regarding first-aid kits for agricultural operations, both high hazard industries, do not contain a physician authorization for the contents of first-aid kits. In fact, these regulations do not even include minimum requirements for the contents of first-aid kits. In addition, it's bewildering that under the existing requirements of Section 1512, scissors are required, but once the new regulation takes effect, an employer will need physician authorization to include them if they follow Table 1.

In contrast the GISO equivalent regulation, as proposed, does not require an employer to obtain a doctor's authorization to add "additional types or quantities of first-aid equipment and/or supplies." Furthermore, proposed Note 1 acknowledges that, "The minimum list of supplies in Table 1 may not be adequate to address the injuries that may occur in some work environments." It notes that specific first-aid treatment in accordance with Safety Data Sheets may be necessary and further clarifies that the provision of first-aid supplies beyond the minimum list in Table 1 may be needed for chemical exposures. Despite these caveats, there is no requirement that the addition of these items to the first aid kit requires a doctor's authorization.

When an employer is providing the required items contained in Table 1 of CCR Section 1512, the regulation should offer the same flexibility regarding the addition of items to the first-aid kit that is

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April 13, 2022

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being proposed to CCR Section 3400. Like workplaces covered by Section 3400, construction projects often have Safety Data Sheets applicable to that workplace which may specify additional first-aid items. Since construction employers are required to have first-aid trained personnel immediately available to render first aid treatment, it is likely these personnel would be familiar with how to utilize the first-aid supplies. Lastly, Section 1512 (c)(3) already requires written physician authorization for drugs, inhalants or medicines to be included in the first-aid kit. If an employer is meeting the minimum first-aid kit content requirements as specified in the Table and complying with Section 1512 (c)(3), a doctor's authorization to place additional first-aid supplies in the kit is unnecessary.

For these reasons, CEA proposes the following language for the Board's consideration:

CCR Section 1512 (c)(2)

(2) Other supplies and equipment, when provided, shall be in accordance with American Red Cross basic first-aid guidelines applicable to ~~the documented recommendations of an employer authorized, licensed physician upon consideration of~~ the extent and type of emergency care to be given based upon the anticipated incidence and nature of injuries and illnesses and availability of transportation to medical care.

Thank you for the opportunity to participate in the rulemaking process.

Sincerely,

A handwritten signature in cursive script that reads "Michael Walton".

Michael Walton
Secretary

CALIFORNIA STANDARDS COMPARISON

SOURCE OF FEDERAL OSHA STANDARD(S):

SCOPE: Applicable throughout state unless otherwise noted.

FEDERAL: §1926.50 and §1910.151	STATE: §1512 and §3400	RATIONALE																																																																						
<p>§1926.50. Medical services and first aid.</p> <p align="center">* * * * *</p> <p>§1926.50(d)(1)</p> <p>First aid supplies shall be easily accessible when required.</p> <p>§1926.50(d)(2)</p> <p>The contents of the first aid kit shall be placed in a weatherproof container with individual sealed packages for each type of item, and shall be checked by the employer before being sent out on each job and at least weekly on each job to ensure that the expended items are replaced.</p> <p align="center">* * * * *</p> <p>Appendix A to § 1926.50 -- First aid Kits (Non-Mandatory)</p> <p>First aid supplies are required to be easily accessible under paragraph Sec. 1926.50(d)(1). An example of the minimal contents of a generic first aid kit is described in American National Standard (ANSI) Z308.1-1978 "Minimum Requirements for Industrial Unit-Type First-aid Kits". The contents of the kit listed in the ANSI standard should be adequate for small work sites. When larger operations or multiple operations are being conducted at the same location, employers should determine the need for additional</p>	<p>§1512. Emergency <u>Medical Services and First Aid.</u></p> <p align="center">* * * * *</p> <p>(c) First-Aid Kit.</p> <p>(1) Every employer working on or furnishing personnel on a construction project, on line crews and on other short duration or transient jobs shall provide at least one first-aid kit in a weatherproof container. The contents of the first-aid kit shall be inspected regularly to ensure that the expended items are promptly replaced. The contents of the first-aid kit shall be arranged to be quickly found and remain sanitary. First-aid dressings shall be sterile in individually sealed packages for each item. The minimum first-aid supplies shall be determined by an employer-authorized, licensed physician or in accordance with the following Table:</p> <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;"></td> <td align="center" colspan="4"><i>Type of Supply Required</i></td> </tr> <tr> <td></td> <td align="center" colspan="4"><i>by Number of Employees</i></td> </tr> <tr> <td></td> <td align="center" colspan="4"><i>over</i></td> </tr> <tr> <td></td> <td align="center">1-5</td> <td align="center">6-15</td> <td align="center">16-200</td> <td align="center">200</td> </tr> <tr> <td>Dressings <u>and other materials</u> in adequate quantities consisting of:</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>1. Adhesive dressings</td> <td align="center">X</td> <td align="center">X</td> <td align="center">X</td> <td align="center">X</td> </tr> <tr> <td>2. Adhesive tape rolls, 1-inch wide</td> <td align="center">X</td> <td align="center">X</td> <td align="center">X</td> <td align="center">X</td> </tr> <tr> <td>3. Eye dressing packet</td> <td align="center">X</td> <td align="center">X</td> <td align="center">X</td> <td align="center">X</td> </tr> <tr> <td>4. 1-inch gauze bandage roll or compress</td> <td></td> <td align="center">X</td> <td align="center">X</td> <td align="center">X</td> </tr> <tr> <td>5. 2-inch gauze bandage roll or compress</td> <td align="center">X</td> <td align="center">X</td> <td align="center">X</td> <td align="center">X</td> </tr> <tr> <td>6. 4-inch gauze bandage roll or compress</td> <td></td> <td align="center">X</td> <td align="center">X</td> <td align="center">X</td> </tr> <tr> <td>7. Sterile gauze pads, 2-inch square</td> <td align="center">X</td> <td align="center">X</td> <td align="center">X</td> <td align="center">X</td> </tr> <tr> <td>8. Sterile gauze pads, 4-inch square</td> <td align="center">X</td> <td align="center">X</td> <td align="center">X</td> <td align="center">X</td> </tr> <tr> <td>9. Sterile surgical pads suitable for</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>		<i>Type of Supply Required</i>					<i>by Number of Employees</i>					<i>over</i>					1-5	6-15	16-200	200	Dressings <u>and other materials</u> in adequate quantities consisting of:					1. Adhesive dressings	X	X	X	X	2. Adhesive tape rolls, 1-inch wide	X	X	X	X	3. Eye dressing packet	X	X	X	X	4. 1-inch gauze bandage roll or compress		X	X	X	5. 2-inch gauze bandage roll or compress	X	X	X	X	6. 4-inch gauze bandage roll or compress		X	X	X	7. Sterile gauze pads, 2-inch square	X	X	X	X	8. Sterile gauze pads, 4-inch square	X	X	X	X	9. Sterile surgical pads suitable for					<p>Revisions are proposed to section 1512 title to be consistent with the title of section 3400 and the title of equivalent federal section 1926.50.</p> <p>Existing and proposed California section 1512(c) are more protective than the equivalent federal section 1926.50(d) and non-mandatory Appendix A regarding provision of first-aid supplies.</p>
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CALIFORNIA STANDARDS COMPARISON

SOURCE OF FEDERAL OSHA STANDARD(S):

SCOPE: Applicable throughout state unless otherwise noted.

FEDERAL: §1926.50 and §1910.151	STATE: §1512 and §3400			RATIONALE		
<p>first aid kits at the worksite, additional types of first aid equipment and supplies and additional quantities and types of supplies and equipment in the first aid kits.</p> <p>In a similar fashion, employers who have unique or changing first-aid needs in their workplace may need to enhance their first-aid kits. The employer can use the OSHA 300 log, OSHA 301 log, or other reports to identify these unique problems. Consultation from the local fire/rescue department, appropriate medical professional, or local emergency room may be helpful to employers in these circumstances. By assessing the specific needs of their workplace, employers can ensure that reasonably anticipated supplies are available. Employers should assess the specific needs of their worksite periodically and augment the first aid kit appropriately.</p> <p>If it is reasonably anticipated employees will be exposed to blood or other potentially infectious materials while using first-aid supplies, employers should provide personal protective equipment (PPE). Appropriate PPE includes gloves, gowns, face shields, masks and eye protection (see "Occupational Exposure to Blood borne Pathogens", 29 CFR 1910.1030(d)(3)).</p> <p style="text-align: center;">* * * * *</p>	pressure dressings		X	X		
	10. Triangular bandages	X	X	X	X	
	11. Safety pins <u>Medical exam gloves</u>	X	X	X	X	
	12. Tweezers and <u>scissors</u>	X	X	X	X	
	* Additional equipment in adequate quantities consisting of:					
	13. Cotton-tipped applicators			X	X	
	14. Forceps <u>Antibiotic treatment, single-use applications</u>	X	X	X	X	
	15. Emesis basin <u>Antiseptic, single-use application</u>	X	X	X	X	
	16. Flashlight			X	X	
	17. Magnifying glass			X	X	
	18. Portable oxygen and its breathing equipment <u>Single-use disposable barrier device in workplaces where performance of CPR may be required</u>	X	X	X	X	
	19. Tongue depressors					X
	19. Appropriate record forms	X	X	X	X	
	20. Up-to-date 'standard' or 'advanced' first-aid textbook, manual or equivalent	X	X	X	X	
<p>*To be readily available but not necessarily within the first-aid kit.</p> <p>(2) Other supplies and equipment, when provided, shall be in accordance with the documented recommendations of an employer-authorized, licensed physician upon consideration of the extent and type of emergency care to be</p>						

CALIFORNIA STANDARDS COMPARISON

SOURCE OF FEDERAL OSHA STANDARD(S):

SCOPE: Applicable throughout state unless otherwise noted.

FEDERAL: §1926.50 and §1910.151	STATE: §1512 and §3400	RATIONALE				
<p>§1910.151. Medical and First Aid</p> <p align="center">* * * * *</p> <p>§1910.151(b)</p> <p>In the absence of an infirmary, clinic, or hospital in near proximity to the workplace which is used for the treatment of all injured employees, a person or persons shall be adequately trained to render first aid.</p> <p>Adequate first aid supplies shall be readily available.</p> <p align="center">* * * * *</p> <p>Appendix A to § 1910.151 -- First aid kits (Non-Mandatory)</p> <p>First aid supplies are required to be readily available under paragraph § 1910.151(b). An example of the minimal contents of a generic first aid kit is described in American National Standard (ANSI) Z308.1-1998 "Minimum Requirements for Workplace First-aid Kits."</p>	<p>given based upon the anticipated incidence and nature of injuries and illnesses and availability of transportation to medical care.</p> <p>(3) Drugs, antiseptics, eye irrigation solutions, inhalants, medicines, or proprietary preparations shall not be included in first-aid kits unless specifically approved, in writing, by an employer-authorized, licensed physician.</p> <p align="center">* * * * *</p> <p>§3400. Medical Services and First Aid.</p> <p align="center">* * * * *</p> <p>(c) <u>Employers shall evaluate the need for first-aid supplies and shall ensure that there are</u> There shall be <u>adequate quantities and types of first-aid materials, approved by the consulting physician,</u> readily available for employees on every job.</p> <p>(1) Such materials shall be kept in a sanitary and usable condition.</p> <p>(2) A frequent inspection shall be made of all first-aid materials, which shall be replenished as necessary.</p> <p>(3) <u>At a minimum, employers shall furnish at least one first-aid kit containing the types and quantities of materials as determined by an employer-authorized, licensed physician or as listed in Table 1. Based upon its size and the type of hazards in the workplace, employers shall evaluate the need for:</u></p> <p>(A) <u>Additional first-aid kits.</u></p> <p>(B) <u>Additional types or quantities of first-aid equipment and/or supplies.</u></p> <p align="center">Table 1: Minimum First-Aid Materials</p> <table border="1"> <thead> <tr> <th>Type of Supply and Minimum Size</th> <th>Minimum Quantity</th> </tr> </thead> <tbody> <tr> <td>Absorbent Compress, 32 sq. in. (206 sq. cm), with no side smaller than 4 in. (10 cm)</td> <td>1</td> </tr> </tbody> </table>	Type of Supply and Minimum Size	Minimum Quantity	Absorbent Compress, 32 sq. in. (206 sq. cm), with no side smaller than 4 in. (10 cm)	1	<p>Existing and proposed California section 3400(c) are more protective than the equivalent federal section 1910.151(b) and non-mandatory Appendix A regarding provision of first-aid supplies.</p>
Type of Supply and Minimum Size	Minimum Quantity					
Absorbent Compress, 32 sq. in. (206 sq. cm), with no side smaller than 4 in. (10 cm)	1					

CALIFORNIA STANDARDS COMPARISON

SOURCE OF FEDERAL OSHA STANDARD(S):

SCOPE: Applicable throughout state unless otherwise noted.

FEDERAL: §1926.50 and §1910.151	STATE: §1512 and §3400	RATIONALE																
<p>The contents of the kit listed in the ANSI standard should be adequate for small worksites. When larger operations or multiple operations are being conducted at the same location, employers should determine the need for additional first aid kits at the worksite, additional types of first aid equipment and supplies and additional quantities and types of supplies and equipment in the first aid kits.</p> <p>In a similar fashion, employers who have unique or changing first-aid needs in their workplace may need to enhance their first-aid kits. The employer can use the OSHA 300 log, OSHA 301 log, or other reports to identify these unique problems. Consultation from the local fire/rescue department, appropriate medical professional, or local emergency room may be helpful to employers in these circumstances. By assessing the specific needs of their workplace, employers can ensure that reasonably anticipated supplies are available. Employers should assess the specific needs of their worksite periodically and augment the first aid kit appropriately.</p> <p>If it is reasonably anticipated that employees will be exposed to blood or other potentially infectious materials while using first aid supplies, employers are required to provide appropriate personal protective equipment (PPE) in compliance with the provisions of the Occupational Exposure to Blood borne Pathogens standard, § 1910.1030(d)(3) (56 FR 64175). This standard lists appropriate PPE for this type of exposure, such as gloves, gowns, face shields, masks, and eye protection.</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Adhesive Bandages, 1 x 3 in. (2.5 x 7.5 cm)</td> <td style="text-align: center; padding: 2px;">16</td> </tr> <tr> <td style="padding: 2px;">Adhesive Tape, 3/8 in. x 2.5 yd. (2.3 m total)</td> <td style="text-align: center; padding: 2px;">1</td> </tr> <tr> <td style="padding: 2px;">Antibiotic Treatment, single-use application</td> <td style="text-align: center; padding: 2px;">6</td> </tr> <tr> <td style="padding: 2px;">Antiseptic, single-use application</td> <td style="text-align: center; padding: 2px;">10</td> </tr> <tr> <td style="padding: 2px;">Medical Exam Gloves</td> <td style="text-align: center; padding: 2px;">2 pair</td> </tr> <tr> <td style="padding: 2px;">Sterile Pad, 3 x 3 in. (7.5 x 7.5 cm)</td> <td style="text-align: center; padding: 2px;">Minimum 4</td> </tr> <tr> <td style="padding: 2px;">Triangular Bandage, 40 x 40 x 56 in. (101 x 101 x 142 cm)</td> <td style="text-align: center; padding: 2px;">1</td> </tr> <tr> <td style="padding: 2px;">Single-use disposable barrier device for CPR in workplaces where performance of CPR may be required</td> <td style="text-align: center; padding: 2px;">1</td> </tr> </table>	Adhesive Bandages, 1 x 3 in. (2.5 x 7.5 cm)	16	Adhesive Tape, 3/8 in. x 2.5 yd. (2.3 m total)	1	Antibiotic Treatment, single-use application	6	Antiseptic, single-use application	10	Medical Exam Gloves	2 pair	Sterile Pad, 3 x 3 in. (7.5 x 7.5 cm)	Minimum 4	Triangular Bandage, 40 x 40 x 56 in. (101 x 101 x 142 cm)	1	Single-use disposable barrier device for CPR in workplaces where performance of CPR may be required	1	<p><u>NOTE 1 to subsection (c)(3): The minimum list of supplies in Table 1 may not be adequate to address the injuries that may occur in some work environments. For example, where there are exposures to chemical hazards for which specific first-aid treatments are specified on the Safety Data Sheets or otherwise recommended (such as for hydrofluoric acid, phenol solutions and cyanide compounds), provision of first-aid supplies beyond the minimum list in Table 1 and appropriate for such chemical exposures may be necessary to achieve compliance with the requirements in the first sentence of Section 3400(c). Similarly, those places of employment with larger numbers of employees or frequent injuries requiring first-aid treatment may find it necessary to stock larger quantities of materials than the amounts listed in Table 1 in order for first-aid supplies to be always readily available.</u></p> <p><u>NOTE 2 to subsection (c)(3): Employers should be aware that whenever first-aid materials for the treatment of chemical injuries are included in</u></p>
	Adhesive Bandages, 1 x 3 in. (2.5 x 7.5 cm)	16																
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CALIFORNIA STANDARDS COMPARISON

SOURCE OF FEDERAL OSHA STANDARD(S):

SCOPE: Applicable throughout state unless otherwise noted.

FEDERAL: §1926.50 and §1910.151	STATE: §1512 and §3400	RATIONALE
	<p><u>first-aid kits, the requirement of Section 5194(h)(2)(E) for training on emergency procedures may be triggered.</u></p> <p style="text-align: center;">* * * * *</p>	

NOVEMBER 3, 2006
ADVISORY COMMITTEE MEETING
FIRST AID

MEETING MINUTES

1

Sign in Sheet: First Aid Advisory Committee Meeting 11/3/06

Name Affiliation/Address Email Address

Name	Affiliation/Address	Email Address
J. Alan Schumann PhD	PRT 481	janschu@lycos.com
L. Henry Curci	PRT 481	acurci@safetylink.com
BRADLEY	AGC OF CA 3095 BEACON BLVD LOS ANGELES CA 90008	BRADLEYB@AGC-CA.ORG
Jay A. Weir	AT&T 9450 CROCKER ROAD GRANITE BAY, CA 95748	jay.weir@att.com
Steve Johnson	Assoc. Roofing Contractors 8301 Edgewater Dr. #202 Oakland CA 94621	safety@archae.org
Tim Lipscomb	Carpenters LU 713 1050 Mattox Rd Hayward CA 94541	TLipscomb@NCCRC.ORG
Rich Weller	Pile Drivers LU 34 55 Hegenberger Pl. Oakland	RWeller@NCCRC.ORG
SEAN GILLES	OAKLAND FIRE 47 CLAY ST OAKLAND CA 94607	SGILLES@OAKLAND.FIRE
INGRID WATHE	AMP/KEY	ilwath@csaff.org
Mary Kochie	CAL/OSHA 4150 Jannings Blvd. Van Nuys CA 91411	mkochie@hq.dir.ca.gov
CARL BORDEN	CA FARA BUREAU 2300 RIVER PLAZA DR SACRAMENTO 95833	cborden@ctbf.com
Janice Prudhomme	CDHS/Richmond	jprudhome@dhs.ca.gov

3
B

Sign in Sheet: First Aid Advisory Committee Meeting 11/3/06

Name	Affiliation/Address	Email Address
HAM FAIRBURN	ORC WORLDWIDE 15231 E WESTRIDGE FOUNTAIN HILLS AZ	ham@orc-sac.com
T. TRASK	EMSA 85268 1930-9th St San CA 95814	SETH@TRASK@EMSA.CA.GOV
Guy Prescott	City of Emeryville Local 8 1628 11th Ave Alameda	gprescott@cc8.org
Tom Mitchell	OSHA	
SAM ILLER	SAFECON FOR AGC SAN DIEGO	SAMI@SAFECON.NET
Jack Blom	Cal. Framing Cont. Assoc.	jblom@iwhs.com

JUNE 29, 2011
ADVISORY COMMITTEE MEETING
FIRST AID

MEETING MINUTES



ATTENDANCE ROSTER

MEETING NAME ADVISORY MEETING DATE 6/29/11

CHAIRPERSON(S) Horowitz LOCATION ROOM ¹² 404, 1515 CLAY STREET, OAKLAND

PLEASE BE SURE YOUR NAME, AFFILIATION, AND E-MAIL ARE CLEAR FOR ACCURATE TRANSCRIPTION - THANKS

NAME, TITLE, AND AFFILIATION	E-MAIL ADDRESS (for notices of future meetings)	PHONE & FAX NUMBERS	MAILING ADDRESS
Edward Calderon Safety Manager Shea Homes	Edward.Calderon@Shea homes.com	408-639-0092	
Mary Kochie	mkochie@dir.ca.gov	(818) 901-5751 (818) 901-5748 Fax	6150 Van Ness Blvd. Suite 405 Van Ness, CA 94401
Carol Banake Buckmore Risk Services	Cmbanake@comcast.net	916-290-4630	1750 Creekside Oaks Dr Suite 200 Sacramento, CA 95833
Steve Johnson Safety Director Assoc. Roofing Contractors	safety@arcbae.org	925-472-8880, x101 925-472-0258 fax	1425 Treat Blvd., Walnut Creek, CA 94597
Eric Rozance Assistant Phylmor Regulatory Roundtable	erozance@phylmor.com erozance@phylmor.com	415 694 9522	ZHS



ATTENDANCE ROSTER

MEETING NAME ADVISORY MEETING DATE 6/29/11

CHAIRPERSON(S) Horowitz LOCATION ROOM 1304, 1515 CLAY STREET, OAKLAND¹²

PLEASE BE SURE YOUR NAME, AFFILIATION, AND E-MAIL ARE CLEAR FOR ACCURATE TRANSCRIPTION - THANKS

NAME, TITLE, AND AFFILIATION	E-MAIL ADDRESS (for notices of future meetings)	PHONE & FAX NUMBERS	MAILING ADDRESS
Roger C. Delight. RN (PhD), ex-USAF Volunteer, County of Sacramento ", Elk Grove C.E.R.T.	RDELIGHT@Comcast.net	916-835-7270	8500 Mission Falls Ave. Elk Grove, CA 95624
Bruce Wick Dir. of Risk Mgt. CALPASC	bwick@ calpasc.org	909-7939932	1150 Brookside Ave., Ste. Q Redlands, CA 92373
Wendy Holt VP Production Affairs + Safety CSATF	wholt@csatf.org	818/565-0550	2800 Winona Ave Burbank, CA 91504
Tanner Crawford with Kate Smiley			
Kate Smiley	AGC-CA	916-769-2895	3095 Beacon Blvd West Sac, CA



ATTENDANCE ROSTER

MEETING NAME ADVISORY MEETING DATE 6/29/11

CHAIRPERSON(S) Horowitz LOCATION ROOM 1204, 1515 CLAY STREET, OAKLAND

PLEASE BE SURE YOUR NAME, AFFILIATION, AND E-MAIL ARE CLEAR FOR ACCURATE TRANSCRIPTION - THANKS

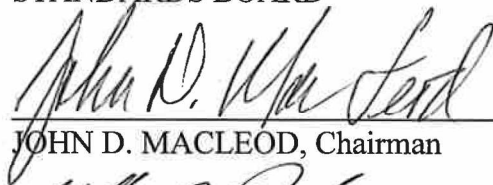
NAME, TITLE, AND AFFILIATION	E-MAIL ADDRESS (for notices of future meetings)	PHONE & FAX NUMBERS	MAILING ADDRESS
JAMES MASON Occup. Hlth + Sfty officer City of Berkeley	jmason@cityofberkeley.org jemason@cityofberkeley.org	510 981-6825	2180 MILWA ST Berkeley, CA 94704
SEAN GILLIS EMS TRAINING OFFICER OFD	SGILLIS@OAKLANDNET.COM	510-773-0836	6525 BUENA VENTURA AVE OAKLAND CA 94605
LINDA MORSE MD Kaiser SF	MORSEL1@comcast.net	510 414 9279	1611 BLAKE BERKELEY 94703

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of a Petition by:)
)
Ricardo Beas, Safety Consultant) PETITION FILE NO. 519
7919 New Salem St.) DECISION
San Diego, CA 92126)
)
)
Applicant.)

The Occupational Safety and Health Standards Board hereby adopts the attached PROPOSED DECISION.

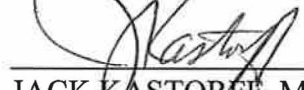
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD



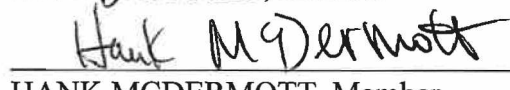
JOHN D. MACLEOD, Chairman



WILLIAM JACKSON, Member



JACK KASTORFF, Member

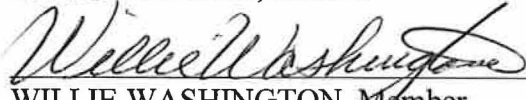


HANK MCDERMOTT, Member

GUY PRESCOTT, Member



DAVID THOMAS, Member



WILLIE WASHINGTON, Member

By: 

Marley Hart, Executive Officer

DATE: 3/17/2011
Attachments

**OCCUPATIONAL SAFETY
AND HEALTH STANDARDS BOARD**

2520 Venture Oaks Way, Suite 350
Sacramento, CA 95833
(916) 274-5721
FAX (916) 274-5743
Website address: www.dir.ca.gov/oshsb



**PROPOSED PETITION DECISION OF THE
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
(PETITION FILE NO. 519)**

INTRODUCTION

The Occupational Safety and Health Standards Board (Board) received a petition on November 3, 2010, from Ricardo Beas (Petitioner). The Petitioner requests the Board to amend Title 8, California Code of Regulations, Section 3400(c) of the General Industry Safety Orders (GISO), concerning first aid materials.

Labor Code section 142.2 permits interested persons to propose new or revised regulations concerning occupational safety and health, and requires the Board to consider such proposals, and render a decision no later than six months following receipt. Further, as required by Labor Code section 147, any proposed occupational safety or health standard received by the Board from a source other than the Division must be referred to the Division for evaluation, and the Division has 60 days after receipt to submit a report on the proposal.

SUMMARY

Section 3400(c) requires employers to provide adequate first aid materials, approved by the consulting physician, readily available for employees on every job. The Petitioner states that the existing standard is deficient in that it does not clearly spell out what first aid materials are required. The Petitioner notes that the consulting physician would have to be fully knowledgeable of the employer's operations and the many different circumstances under which injuries can result. He states that the amount and type of first aid materials necessary for each such situation can vary substantially, based on type of employer operations or size of workforce in any particular onsite or offsite location. The Petitioner proposes that Section 3400(c) be revised to allow employers to look at sources other than a physician to determine its particular needs for first aid materials. He suggests that these other sources should include: 1) the American National Standard Instituted (ANSI) standard Z308.1-1998, Minimum Requirements for Workplace First-aid Kits, which is referenced in the federal OSHA first aid standard, 29 CFR 1910.151; and 2) a table of first aid supplies, similar to the table in Title 8, Construction Safety Orders (CSO), Section 1512(c)(1). The Petitioner notes that Section 1512, Emergency Medical Services, allows employers to provide first aid materials that are either approved by the consulting physician or provide the first aid materials listed in the table included in the standard. He states that Section 3400 should be modified to be similar to the CSO requirements for first aid materials.

DIVISION'S EVALUATION

The Division's evaluation report dated December 31, 2010, recommends that the Petition be granted to the extent that an advisory committee is convened to consider the Petitioner's request, and review and revise, as necessary, the table of minimum first aid supplies in Section 1512(c) of the CSO.

STAFF'S EVALUATION

On November 3, 2006, the Division convened an advisory committee to consider the issues presented in Petitions No. 481, 482 and 483. Petition No. 483 sought to allow use of ANSI Z308.1 compliant first aid kits as an alternative to the approval of first aid kit contents by a consulting physician. While the committee did not reach agreement on this issue, employer representatives strongly supported the petitioner's proposal. The committee did agree that the table of first aid supplies in Section 1512 is outdated, but some participants felt that the correct expertise to review the table was not present at the meeting and that expanding the scope of the advisory committee to update the current table went beyond the petitioner's request to rely on the ANSI Z308.1 standard.

The Division's evaluation of Petition No. 519 notes that when the Board adopted amendments to Section 3400 at the July, 2009 Board Meeting, the Division agreed to revisit requirements for first aid supplies. The Petitioner's proposal has merit; however it is evident from past experience with similar petitions and advisory committees that dealt with similar proposals that stakeholders have differing opinions in regards to specifying the minimum contents of first aid kits, requiring the contents be approved by a physician, and including prescription and non-prescription medications in kits. Board staff concludes that the Petitioner's recommendation raises several technical, practical, and potential legal issues that should be considered by an advisory committee composed of employee and employer representatives from general industry and the construction industry as well as technical experts in such fields as occupational medicine and emergency medical services and first aid.

Board staff recommends that the petition be granted as set forth in the Conclusion and Order.

CONCLUSION AND ORDER

The Occupational Safety and Health Standards Board has considered the petition of Ricardo Beas, to make recommended changes to Section 3400(c) of the GISO, concerning first aid materials. The Board has also considered the recommendations of the Division and Board staff. For reasons stated in the preceding discussion, the Petition is hereby GRANTED to the extent that the Division is requested to convene a representative advisory committee (composed of employee and employer representatives from general industry and the construction industry as well as technical experts in such fields as occupational medicine and emergency medical services and first aid) for the purpose of addressing the issues presented in Petition No. 519 and reviewing

and revising, as necessary, the required first aid supplies listed in Section 1512(c). The Petitioner should be extended an invitation to participate in the advisory committee.

Occupational Safety and Health Standards Board

Business Meeting

Occupational Safety and Health Standards Board

Business Meeting Standards for Adoption

TITLE 8

GENERAL INDUSTRY SAFETY ORDERS

**ARTICLE 10.1, SECTION 3401, SECTION 3402,
NEW SECTIONS 3402.1 - 3402.3,**

**SECTIONS 3403 - 3410, NEW SECTION 3410.1, AND
SECTION 3411**

**FIRE FIGHTERS' PERSONAL PROTECTIVE CLOTHING
AND EQUIPMENT – AB 2146 (2014)**

HYPERLINKS TO RULEMAKING DOCUMENTS:

[TEXT FOR BOARD CONSIDERATION](#)

[FINAL STATEMENT OF REASONS](#)

[INITIAL STATEMENT OF REASONS](#)

MOVED, That the following resolution be adopted:

WHEREAS, On January 29, 2021, the Occupational Safety and Health Standards Board, pursuant to Government Code Section 11346.4, fixed the time and place for a Public Hearing to consider the revisions to Title 8, General Industry Safety Orders, Article 10.1, section 3401, section 3402, new sections 3402.1 - 3402.3, sections 3403 - 3410, new section 3410.1, and section 3411, Fire Fighters’ Personal Protective Clothing and Equipment – AB 2146 (2014).

WHEREAS, Such Public Hearing was held via teleconference and videoconference in Sacramento, California, on March 18, 2021, and there are now before the Occupational Safety and Health Standards Board the proposed revisions to Title 8, General Industry Safety Orders, Article 10.1, section 3401, section 3402, new sections 3402.1 - 3402.3, sections 3403 - 3410, new section 3410.1, and section 3411, Fire Fighters’ Personal Protective Clothing and Equipment – AB 2146 (2014); therefore, be it

RESOLVED By the Occupational Safety and Health Standards Board in regular meeting held in Oakland, California, on April 21, 2022, that the proposed revisions to Title 8, General Industry Safety Orders, Article 10.1, section 3401, section 3402, new sections 3402.1 - 3402.3, sections 3403 - 3410, new section 3410.1, and section 3411, Fire Fighters’ Personal Protective Clothing and Equipment – AB 2146 (2014), be adopted.

RESOLVED That the Occupational Safety and Health Standards Board shall file with the Office of Administrative Law a sufficient number of copies of said filing documents and a copy of the rulemaking file for use by the Office of Administrative Law.

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

DAVE THOMAS, CHAIRMAN

Certified As A Regulation
Of the Occupational Safety
And Health Standards Board

BY: _____
Christina Shupe, Executive Officer

DATED: April 21, 2022

**FIRE FIGHTERS' PERSONAL PROTECTIVE CLOTHING
AND EQUIPMENT – AB 2146 (2014)**

[FIRST 15-DAY NOTICE \(OCTOBER 29, 2021\)](#)



November 18, 2021

Occupational Safety and Health Standards Board
2520 Venture Oaks Way, Suite 350
Sacramento, CA 95833

Dear Standard Board Members:

On behalf of the California Professional Firefighters (CPF), CAL FIRE Local 2881 and the International Association of Fire Fighters (IAFF) we are pleased to provide comments to the Occupational Safety and Health Standards Board (Board) regarding the proposed updates to the Fire Fighters' Personal Protective Clothing and Equipment Standard, and specifically to the proposed modifications released on October 29, 2021. Our organizations collectively represent more than 30,000 career firefighting and emergency medical service personnel operating in California. Our members are actively responding to structure fires, wildland fires and fires in the wildland urban interface.

CPF was pleased to sponsor AB 2146 (Skinner/ Chapter 811, Statutes of 2014) and our organizations participated in the advisory process developed to help advise the Board in developing updates to this standard. We appreciate the Standards Board hearing our comments on the 45-day package and directing the staff to address concerns our organizations raised. We appreciate the engagement of the Standards Board staff in the recent months on the proposed Standard and the October 29th proposed modification makes some progress to improve the proposal but some significant deficiencies in the standard remain present.

Regarding progress, we appreciate and support the removal of §3410.1 (c) relating to wildland respiratory protection. Respiratory protection in the wildland and wildland urban interface remains a difficult challenge. The proposal to quickly initiate an advisory committee process to reassess is sound and we look forward to participating in a robust process to address the challenges of ensuring adequate respiratory protections, while eliminating potential unintended health risks associated with these regulations. We agree the regulation needs to be updated to help push for improvements in this arena but also recognize that more work needs to be completed to protect firefighters in California. As we noted previously, rules regarding wildland respiratory protection must include a clear process for a field evaluation of new technology and that process must include both labor and management in all phases of decision-making about utilization and purchase of this equipment.

While the removal of §3410.1 (c) is a positive development, we must express our disappointment that our proposed changes to §3409 (c)(2) were not accepted. In our view, there is no sound reasoning to exclude labor from the process to determine when an incident commander can determine when a firefighter should not use their SCBA during overhaul. As noted on pages 26 and 27 of the proposed

modifications, we proposed two different mechanisms to ensure labor has a seat at the table to develop standard operating procedures on how the decision will be made to determine when “a lesser level of protection provides for employee safety”. Moreover, we proposed that there be a clear reporting structure when SCBA is not used during overhaul and do not see any sound rationale to not include that mechanism in the regulations. While we respect that there are other regulations that are highlighted in the response to comments, we do not see why the existence of employer obligations in those regulations serves as a reason to not provide labor an explicit seat at the table in these regulations.

Knowing that these regulations make progress but still contain significant deficiencies, we would support a path forward to adopt these regulations if, as part of the motion and vote, the following conditions are adopted by the Standards Board:

1. Clearly articulate purchase and wear standards: Within six months, develop a frequently asked questions, or if necessary, bring back rulemaking to the Standards Board, that clearly articulates the interaction of the purchase and wear standards in the regulation to ensure that employers clearly understand the incentives to purchase PPE that is compliant with the most recently published NFPA standard.
2. Robust Firefighter/Labor Participation: Within six months, bring back a rulemaking that ensures robust labor/firefighter participation in all phases of personal protective equipment purchasing and use, including:
 - a. Processes for authorized labor representatives to be a part of personal protective equipment decision making.
 - b. Clear rules that provide a labor seat at the table for determining standard operating procedures for determining how an incident commander determines that a SCBA should not be used during overhaul operations.
 - c. Clear documentation and reporting mechanisms when exclusions in the regulation are exercised.
3. Wildland Respiratory Protections: Within one year, following an advisory group process as proposed in the 15-day package, propose to the Standards Board a standard for wildland firefighter respiratory protection that includes:
 - a. A field evaluation process that must take place before certifying a respiratory protection device suitable for wildland and/or wildland urban interface firefighting operations
 - b. A clear timeline for equipment acquisition if approved through the field evaluation process
 - c. Clear processes for firefighter and labor engagement in the field evaluation process.

If these conditions are not included as part of an adopted motion on this rule, we strongly urge the Standards Board to reject this proposal and direct the Standards Board and Division staff to work with stakeholders to revise the proposal to address our concerns.

California’s firefighters are among the most highly trained and skilled all risk firefighting forces in the world. Every day firefighters place themselves in danger to protect the citizens and communities they serve. In the last 20 years, the understanding of occupational risks faced by firefighters has evolved significantly. As the fire service has better understood these risks, we have worked to limit occupational exposure to hazards, implemented enhanced training systems, established better

firefighting techniques and improved personal protective equipment to help minimize potential harm to firefighters as they operate in the field. Despite these improvements, occupational injuries and diseases are still highly prevalent among firefighters. Some of these risks come inherently due to firefighting requiring operation in an Immediate Danger to Life and Health (IDLH) environment but continued safety improvements help mitigate those risks.

As representatives of the State's professional firefighters the need to ensure firefighter voices are considered in the final adoption of this regulation is paramount. We thank you for all your work on this proposal and thank you in advance for your consideration of our feedback.

Should you have any questions, please do not hesitate to reach out to Kevin Greene at kgreene@cpf.org.

Sincerely,



Brian K. Rice
President, California Professional Firefighters



Tim Edwards
President, CalFire Firefighters Local 2881



Rick Swan
Director, Health & Safety Operational Services
International Association of Fire Fighters



Memorandum

Date: November 18, 2021

To: Christina Shupe, Executive Officer
Occupational Safety and Health Standards Board

From: Mike Wilson, Senior Industrial Hygienist, Research and Standards Health Unit
Eric Berg, Deputy Chief of Health *Eric Berg*

Subject: NOTICE OF PROPOSED MODIFICATIONS TO CALIFORNIA CODE OF REGULATIONS, General Industry Safety Orders, Article 10.1, Section 3401, Section 3402, New Sections 3402.1 - 3402.3, Sections 3403 - 3410, New Section 3410.1, and Section 3411 Fire Fighters' Personal Protective Clothing and Equipment – AB 2146 (2014)

The Division of Occupational Safety and Health (Cal/OSHA) is pleased to provide comments on the above-named regulations in which modifications are being considered as a result of public comments, Cal/OSHA comments, and/or Board staff consideration. As we noted in March 2021, we believe the proposed standards have the potential to genuinely improve firefighter safety and health.

In the previous draft, Cal/OSHA offered several recommendations to improve the clarity of the rule, and we expressed specific concern over what we considered to be weaknesses in three areas: (1) the use of SCBAs during structural fire overhaul; (2) respiratory protection during wildland and WUI firefighting; and (3) whether the standard clearly applies to firefighters operating in the wildland urban interface (WUI) as well as in wildland settings, as defined in the rule.

Our responses to these three concerns as they stand in the current language are as follows:

1) Use of SCBAs during structural fire overhaul.

Cal/OSHA appreciates the amended text in subsection 3409(c)(2), which we believe strengthens this provision by requiring that the employer be able to demonstrate that a lesser level of protection will (in actual practice during overhaul) provide for employee safety:

(c)(2) SCBA shall be worn during overhaul operations unless the employer can demonstrate that a lesser level of protection ~~is appropriate~~ provides for employee safety.

To be successfully implemented, however, this performance-based requirement must include an employee participation element, similar to subsection (q) of the Process Safety Management for Petroleum Refineries (CCR title 8, §5189.1) standard. Inclusion of such an element provides a structured way for fire department employers and employees to jointly develop standard operating procedures (SOPs) that address the practical meaning of the phrases, “lesser level of protection” and “provides for employee safety,” in the context of overhaul.

For example, some fire departments allow firefighters to remove their SCBA when a direct-reading instrument shows a low level of carbon monoxide in the indoor spaces where overhaul is taking place. Carbon monoxide measurements, however, do not capture multiple other toxic air contaminants and fine particulate matter that are present in these spaces during overhaul; this practice is therefore inappropriate and certainly does not “provide for employee safety.”

During revisions to the standard, we recommend that the overhaul provisions of §3409(c) be revised to include the right of employees to participate “throughout all phases” in the development of SOPs in order to ensure the appropriate use of SCBAs during overhaul and to define when a “lesser level of protection” will effectively provide for employee safety.

2) Respiratory protection during wildland/WUI firefighting

Cal/OSHA appreciates the Board staff’s decision to remove the provisions of 3410.1(c), *Respiratory Protection* (1), (2) and *Exception*:

“(1) Wildland fire fighters exposed or who could become foreseeably exposed to harmful exposure in the course of their assigned activities shall be provided with and shall use respiratory protective devices that are approved and certified in accordance with Section 5144, and the methods and requirements specified by the National Institute of Occupational Safety and Health (NIOSH) under 42 CFR part 84.

(2) Air purifying respirators for wildland fire fighting operations shall be NIOSH-approved as complying with NFPA 1984, Standard on Respirators for Wildland Fire Fighting Operations, 2016 Edition, which is hereby incorporated by reference.

EXCEPTION to Section 3410.1(c)(2). Market Availability. Respiratory protection complying with NFPA 1984, Standard on Respirators for Wildland Fire Fighting Operations, 2016 Edition, which is hereby incorporated by reference, is required one year after the product is available in the market.”

Cal/OSHA agrees with Board staff “that a more robust and detailed discussion needs to take place in order to craft language that address(es) the complexities of respiratory protection for wildland fire fighters.” Given the scale and pace of California’s wildfires in recent years, Cal/OSHA strongly supports an expedited

process in 2022 to develop respiratory protection requirements for wildland and WUI firefighting that are effective and enforceable.

To this end, Cal/OSHA recommends that these requirements include: (1) a specific focus on the use of fire-rated, powered air purifying respirators (PAPRs), rather than traditional non-powered air-purifying cartridge respirators (APRs), as distinguished in both the 2011 and 2022 versions of the National Fire Protection Association (NFPA) Standard 1984; (2) a risk assessment that employers must undertake as part of using fire-rated PAPRs during WUI/wildland operations; (3) an evaluation process under actual WUI/wildland firefighting conditions to assess the efficacy of fire-rated PAPRs under a range of conditions, including fire-line work, structure protection, search and rescue, evacuation operations, and overhaul of burned-over areas; (4) provisions giving employees the right to participate alongside managers in the development of SOPs for the use of fire-rated PAPRs; and (5) a process to document the rationale when a decision is made by an employer to use or not to use PAPRs during WUI or wildland firefighting.

As noted above, the right of employees to participate “throughout all phases” of safety decision-making has been established in the Process Safety Management for Petroleum Refineries standard, subsection (q) (CCR title 8, §5189.1).

3) Use of the term “wildland urban interface (WUI)” wherever the term “wildland” is used in the standard.

Cal/OSHA appreciates the new definition for “Wildland Urban Interface:”

“Wildland Urban Interface (WUI). The zone of transition between unoccupied land and human development. It is the line, area or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels. Communities adjacent to and surrounded by wildland are at varying degrees of risk from wildfires.”

The regulation should unambiguously apply to firefighters operating in both WUI and wildland conditions, as defined. This is important because WUI conditions are distinct from both wildland and structural firefighting. For example, when firefighters are operating in neighborhoods with structure fires that were initiated by a wildland fire, they do not engage in traditional structural firefighting, nor do they engage in traditional wildland firefighting. They are often operating under conditions of heavy smoke and heat (typical of a structure fire), while also operating in the vast, fast moving, rapidly expanding conditions of a wildland fire. The regulation must be clear that firefighters operating under these conditions in the WUI are covered by the standard.

The NFPA now clearly distinguishes wildland and WUI firefighting. The 2016 version of NFPA 1977 (*Standard on Protective Clothing and Equipment for Wildland Fire Fighting*) does not include WUI firefighting as a condition that falls under the definition of “wildland firefighting.” This was remedied in the 2022 version of NFPA 1977 (issued March 18, 2021), now entitled *Standard on Protective*

Clothing and Equipment for Wildland Fire Fighting and Urban Interface Fire Fighting. Similarly, the 2022 version of NFPA 1984 (issued March 18, 2021) adds WUI to the title: *Standard on Respirators for Wildland Fire-Fighting and Wildland Urban Interface Operations.* The proposed standard should reflect the approach taken by the NFPA and explicitly include WUI wherever the term “wildland” appears.

Cal/OSHA’s Research and Standards Health Unit looks forward to working closely with Standards Board staff in 2022 to develop revisions to the issues noted above.

Please feel free to contact us with any questions.

**DEPARTMENT OF FORESTRY AND FIRE PROTECTION**

P.O. Box 944246

SACRAMENTO, CA 94244-2460

(916) 653-7772

Website: www.fire.ca.gov

November 18, 2021

Department of Industrial Relations
Occupational Safety and Health Standards Board
2520 Venture Oaks Way, Suite 350
Sacramento, CA 95833

Department of Forestry and Fire Protection's (CAL FIRE) Comments on Fire Fighters' Personal Protective Clothing and Equipment – AB 2146

Thank you for the opportunity to comment on the potential revisions to the Fire Fighters' Personal Protective Clothing and Equipment regulations. The following represents CAL FIRE's second round of comments to the Occupational Safety and Health Standards Board ("Board") proposed modifications to the California Code of Regulations changes to Title 8, Division 1, Chapter 4. Additionally, we understand that the Board may hold a stakeholder meeting in January to discuss and receive further comment on these proposed changes. CAL FIRE would appreciate the opportunity to participate and potentially elaborate on our comments should that meeting take place.

CCR Title 8 Section 3402.3 (NFPA 1851, 7.1) & 3410(d)

This proposed regulation would likely have a currently unquantifiable impact, on CAL FIRE operations if it were to immediately take effect. CAL FIRE has roughly 473 fire stations, and over 9,500 personnel spread throughout the State of California. Operationally, the Department is divided into a northern and southern region which is further divided into 12 Units and 9 Units respectively. The Units are each responsible for CAL FIRE operations and many include additional fire protection responsibilities under cooperative fire protection agreements. Operationally, each Unit has its own unique characteristics of being more or less rural, or geographically easier to travel across or traverse.

CAL FIRE has not had the opportunity to internally evaluate the fiscal costs and operational issues associated with ensuring its compliance with the proposed regulation. However, as stated, a large number of CAL FIRE stations are located in rural areas. In the event CAL FIRE is required to place an extractor at every station, those stations would potentially require upgrades to their electrical and septic systems. Additional structures might also be required to house the extractors and any associated equipment. The fiscal impact to CAL FIRE would likely be significant. While some Units are better suited to comply with this regulation, much of the laundering would have to take place off-site. In complying with the provision as they are currently proposed, personnel would essentially be "out-of-service", after returning from an incident until the laundering has been completed. Operationally, not every CAL FIRE Unit has issued or budgeted for a second set of each required Personal Protective Equipment (PPE) ensemble, which includes

structural and wildland garments. CAL FIRE would need to evaluate and factor in the fiscal impact into its next budgeting cycle. CAL FIRE looks forward to being able to collaborate on this issue at any stakeholder meeting.

Due to the potential fiscal and operational impacts, CAL FIRE requests the provisions of this proposed regulations take effect in July 2025. That would give CAL FIRE one full budget cycle to request additional funding from various sources, strategically place resources and implement policy consistent with the regulation.

CCR Title 8 Section 3402.3 (NFPA 1851, 4.3) & 3410(g)

CAL FIRE believes the record retention is unduly burdensome. The data that must be tracked, to do so optimally with an organization of CAL FIRE's size, would require a complex software program. CAL FIRE can put into the Department's PPE plan what each worksite/station must keep track for wildland, structure, proximity and SCBA gear and let them implement their own spreadsheets or tracking mechanisms, but processes won't be aligned. There wouldn't be oversight of the data that encompasses the Department as a whole and that could lead to CAL FIRE being cited repeatedly as an organization under SB 606. The provisions do not have an effective date for Chapter 4 (4.3 records requirement) as they do for Chapters 5-7 and Chapter 10 of NFPA 1851.

CAL FIRE is requesting at least 6 months to revise and implement our PPE plan instructing worksites to include all the elements that must be tracked by each worksite, at least until an all-encompassing tracking system can be put into place.

CCR Title 8 Section 3402.3 (NFPA 1851, 6.3)

Another concern for CAL FIRE is the requirement for advanced inspections under NFPA 1851, which requires an annual inspection by a manufacturer trained organization for all structure PPE. If specific individuals performing these inspections need training by the manufacturer, CAL FIRE would need to ensure Forestry Logistics Officers (FLOs) in each Unit are trained and worksites will need to take their ensembles to FLOs for annual inspections. This may be burdensome for the Unit FLOs and for the manufacturers in the beginning. Pending the need to do further research, CAL FIRE may need an additional position in every Unit to manage the annual inspection process; this position could also manage the tracking and record retention element at the unit level.

Please feel free to reach out to Staff Chief Jeremy Lawson for questions or further details on CAL FIRE's position and perspective. Chief Lawson can be reached via email at Jeremy.Lawson@fire.ca.gov or by phone at (209) 332-0891.

**FIRE FIGHTERS' PERSONAL PROTECTIVE CLOTHING
AND EQUIPMENT – AB 2146 (2014)**

[SECOND 15-DAY NOTICE \(JANUARY 5, 2022\)](#)



January 20, 2022

Occupational Safety and Health Standards Board
2520 Venture Oaks Way, Suite 350
Sacramento, CA 95833

Submitted Via Email: oshsb@dir.ca.gov.

Dear Standard Board Members:

On behalf of the California Professional Firefighters (CPF), CAL FIRE Local 2881 and the International Association of Fire Fighters (IAFF) we are pleased to provide comments to the Occupational Safety and Health Standards Board (Board) regarding the proposed updates to the Fire Fighters' Personal Protective Clothing and Equipment Standard, and specifically to the proposed modifications and response to comments released on January 5, 2022. Our organizations collectively represent more than 30,000 career firefighting and emergency medical service personnel operating in California. Our members are actively responding to structure fires, wildland fires and fires in the wildland urban interface.

CPF was pleased to sponsor AB 2146 (Skinner/ Chapter 811, Statutes of 2014) and our organizations participated in the advisory process developed to help advise the Board in developing updates to this standard. We appreciate the Standards Board hearing our comments on the 45-day package and directing the staff to address concerns our organizations raised. As we noted in our previous comments, we appreciate the engagement of the Standards Board staff in the recent months, including the removal of §3410.1 (c) relating to wildland respiratory protection to allow for more discussion and work to be done to ensure regulations around wildland respiratory protection are appropriate and have clear firefighter input.

In our previous comments, we also raised significant concern that the regulations do not include more robust guardrails around the requirements to use self-contained breathing apparatus during overhaul and generally around the lack of explicit inclusion of firefighter labor organizations being embedded within the decision making that will occur due to these regulations. As noted in the response to comments for this 15-day package, our previous comments about explicit roles for labor, clear FAQ's and other changes are outside the scope of this rulemaking and may be considered in an upcoming advisory process.

Given this, we believe it is imperative that if the Standards Board, when considering this package, elects to adopt these regulations, you include in your motion the following direction:

1. Clearly articulate purchase and wear standards: Within six months, develop a frequently asked questions, or if necessary, bring back rulemaking to the Standards Board, that clearly articulates the interaction of the purchase and wear standards in the regulation to ensure that employers clearly understand the incentives to purchase PPE that is compliant with the most recently published NFPA standard.
2. Robust Firefighter/Labor Participation: Within six months, bring back a rulemaking that ensures robust labor/firefighter participation in all phases of personal protective equipment purchasing and use, including:
 - a. Processes for authorized labor representatives to be a part of personal protective equipment decision making.
 - b. Clear rules that provide a labor seat at the table for determining standard operating procedures for determining how an incident commander determines that a SCBA should not be used during overhaul operations.
 - c. Clear documentation and reporting mechanisms when exclusions in the regulation are exercised.

3. Wildland Respiratory Protections: Within one year, following an advisory group process as proposed in the 15-day package, propose to the Standards Board a standard for wildland firefighter respiratory protection that includes:
 - a. A field evaluation process that must take place before certifying a respiratory protection device suitable for wildland and/or wildland urban interface firefighting operations
 - b. A clear timeline for equipment acquisition if approved through the field evaluation process
 - c. Clear processes for firefighter and labor engagement in the field evaluation process.

If these conditions are not included as part of an adopted motion on this rule, we strongly urge the Standards Board to reject this proposal and direct Standards Board and Division staff to work with stakeholders to revise the proposal to address our concerns.

California's firefighters are among the most highly trained and skilled all risk firefighting forces in the world. Every day firefighters place themselves in danger to protect the citizens and communities they serve. In the last 20 years, the understanding of occupational risks faced by firefighters has evolved significantly. As the fire service has better understood these risks, we have worked to limit occupational exposure to hazards, implemented enhanced training systems, established better firefighting techniques and improved personal protective equipment to help minimize potential harm to firefighters as they operate in the field. Despite these improvements, occupational injuries and diseases are still highly prevalent among firefighters. Some of these risks come inherently due to firefighting requiring operation in an Immediate Danger to Life and Health (IDLH) environment but continued safety improvements help mitigate those risks.

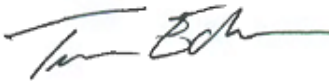
As representatives of the State's professional firefighters the need to ensure firefighter voices are considered in the final adoption of this regulation is paramount. We thank you for all your work on this proposal and thank you in advance for your consideration of our feedback.

Should you have any questions, please do not hesitate to reach out to Kevin Greene at kgreene@cpf.org.

Sincerely,



Brian K. Rice
President, California Professional Firefighters



Tim Edwards
President, CalFire Firefighters Local 2881



Rick Swan
Director, Health & Safety Operational Services
International Association of Fire Fighters

**FIRE FIGHTERS' PERSONAL PROTECTIVE CLOTHING
AND EQUIPMENT – AB 2146 (2014)**

[THIRD 15-DAY NOTICE \(FEBRUARY 8, 2022\)](#)

TITLE 8

GENERAL INDUSTRY SAFETY ORDERS

PROPOSED EMERGENCY TEMPORARY STANDARD FOR RE-ADOPTION

CHAPTER 4, SUBCHAPTER 7, NEW SECTIONS 3205, 3205.1, 3205.2, 3205.3, AND 3205.4

COVID-19 PREVENTION

- [NOTICE OF PROPOSAL FOR READOPTION OF EMERGENCY ACTION](#)
- [FINDING OF EMERGENCY/INFORMATIVE DIGEST](#)
- [PROPOSED REGULATORY TEXT FOR READOPTION](#)
- [PROPOSED REGULATORY TEXT FOR READOPTION \(SHOWING CHANGES FROM CURRENT EMERGENCY REGULATION – COURTESY COPY\)](#)

MOVED, That the following resolution be adopted:

WHEREAS, The Occupational Safety and Health Standards Board (Board) finds that unless a regulation is adopted on an emergency basis, the COVID-19 pandemic poses a real and substantial risk of occupational exposure to harmful effects of the SARS-CoV-2 virus that causes COVID-19, and that immediate action is necessary to mitigate this risk by providing more clear direction to employers on how to safeguard employees to the extent that the nature of the work reasonably permits. The Board further adopts and makes findings set forth in the Finding of Emergency that is part of the Notice of Proposed Emergency Action prepared in this matter. Therefore, be it

RESOLVED, that based on the finding stated above, the Board finds that amendments to Title 8, California Code of Regulations, Chapter 4, Subchapter 7, new sections 3205, 3205.1, 3205.2, 3205.3 and 3205.4 of the General Industry Safety Orders, must be adopted on an emergency basis for the immediate and continued preservation of the public health and safety in the workplace, and general welfare in the workplace; and be it further

RESOLVED by the Board, at a meeting held in Oakland, California, on April 21, 2022, that the proposed amendments of Title 8, California Code of Regulations, Chapter 4, Subchapter 7, new sections 3205, 3205.1, 3205.2, 3205.3 and 3205.4 of the General Industry Safety Orders, appended hereto, be adopted as an emergency regulation; and be it further

RESOLVED that the Board shall file with the Office of Administrative Law a sufficient number of copies of said filing documents and a copy of the rulemaking file for use by the Office of Administrative Law.

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

DAVE THOMAS, CHAIRMAN

Certified As A Regulation
Of the Occupational Safety
And Health Standards Board

BY: _____
Christina Shupe, Executive Officer

DATED: April 21, 2022

Occupational Safety and Health Standards Board

**Business Meeting
Petition 594**

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of a Petition by:)	
)	PETITION FILE NO. 594
Greg McClelland)	
Executive Director)	
Western Steel Council)	
990 Reserve Drive, Suite 104)	
Roseville, CA 95678)	
_____ Applicant.)	

The Occupational Safety and Health Standards Board hereby adopts the attached PROPOSED DECISION.

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

DAVID THOMAS, Chairman

BARBARA BURGEL, Member

KATHLEEN CRAWFORD, Member

DAVE HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

By: _____
Christina Shupe, Executive Officer

DATE: April 21, 2022
Attachments

PETITION NO. 594

Petitioner requests to amend title 8, General Industry Safety Orders, section 3203(a) to include procedures to implement applicable, published California Department of Public Health (CDPH) guidelines following a declaration of a state of emergency and an executive order directing CDPH to publish workplace guidance to mitigate “aerosol transmissible pathogen” spread in the workplace.

HYPERLINKS TO PETITION NO. 594 DOCUMENTS:

[PROPOSED PETITION DECISION](#)

[BOARD STAFF EVALUATION](#)

[CAL/OSHA EVALUATION](#)

[ORIGINAL PETITION \(RECEIVED 11/08/21\)](#)

Occupational Safety and Health Standards Board

Business Meeting

Proposed Variance Decisions

**CONSENT CALENDAR—PROPOSED VARIANCE DECISIONS
APRIL 21, 2022, MONTHLY BUSINESS MEETING
OF THE OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

PROPOSED DECISIONS FOR BOARD CONSIDERATION, HEARD ON March 23, 2022

Docket Number	Applicant Name	Safety Order(s) at Issue	Proposed Decision Recommendation
1. 19-V-198M1	CIM Real Assets & Credit Fund DBA RACR SORA, LLC	Elevator	GRANT
2. 20-V-002M2	SJ 1WSC LLC	Elevator	GRANT
3. 20-V-112M1	1554 Market St Development LLC	Elevator	GRANT
4. 20-V-432M1	The Kavli Foundation	Elevator	GRANT
5. 21-V-262M1	Wonderful Real Estate Development, LLC	Elevator	GRANT
6. 21-V-371M1	Ramesta Hospitality	Elevator	GRANT
7. 21-V-498	San Francisco Bay Area Rapid Transit District	Elevator	GRANT
8. 21-V-499	San Francisco Bay Area Rapid Transit District	Elevator	GRANT
9. 21-V-501	San Francisco Bay Area Rapid Transit District	Elevator	GRANT
10. 21-V-503	San Francisco Bay Area Rapid Transit District	Elevator	GRANT
11. 21-V-567	Los Angeles World Airports	Elevator	GRANT
12. 21-V-568	Los Angeles World Airports	Elevator	GRANT
13. 21-V-601	Stockton Lodging Inc	Elevator	GRANT
14. 22-V-001	T-Rose Investments LLC	Elevator	GRANT
15. 22-V-002	Ogden Garden LP	Elevator	GRANT
16. 22-V-003	Sharp HealthCare	Elevator	GRANT
17. 22-V-004	US 3223 Wilshire Owner, LLC	Elevator	GRANT
18. 22-V-005	Mercy Housing California 89 L.P.	Elevator	GRANT

Docket Number	Applicant Name	Safety Order(s) at Issue	Proposed Decision Recommendation
19. 22-V-006	Oakland Civic LLC	Elevator	GRANT
20. 22-V-007	Block 7 Retail Investors, LLC	Elevator	GRANT
21. 22-V-008	City of San Diego	Elevator	GRANT
22. 22-V-009	City of San Diego	Elevator	GRANT
23. 22-V-010	All Peoples Community Center	Elevator	GRANT
24. 22-V-011	San Diego Unified School District	Elevator	GRANT
25. 22-V-012	Kohl's	Elevator	GRANT
26. 22-V-013	Duarte Multifamily, LLC	Elevator	GRANT
27. 22-V-014	Cargan 1031, LLC	Elevator	GRANT
28. 22-V-015	Fountain Owner, LLC	Elevator	GRANT
29. 22-V-016	Summitrose Investments, LP	Elevator	GRANT
30. 22-V-025	Healthpeak Properties	Elevator	GRANT
31. 22-V-026	Barstow Hospitality LLC	Elevator	GRANT
32. 22-V-027	SN Gramercy 2626, LLC	Elevator	GRANT
33. 22-V-028	Digital 1550 Space Park, LLC	Elevator	GRANT
34. 22-V-029	NCRC NSV, LP	Elevator	GRANT
35. 22-V-030	182 - 186 Virgil LLC	Elevator	GRANT
36. 22-V-031	1000 Gardner LLC	Elevator	GRANT
37. 22-V-032	Los Angeles World Airports	Elevator	GRANT
38. 22-V-033	USBT Property Owner LP	Elevator	GRANT
39. 22-V-034	Sahar Sepehrnia	Elevator	GRANT

PROPOSED DECISIONS FOR BOARD CONSIDERATION, HEARD ON April 14, 2022

Docket Number	Applicant Name	Safety Order(s) at Issue	Proposed Decision Recommendation
40. 20-V-357	Frontier Kemper - Tutor Perini Joint Venture	GISO	GRANT/DENY

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application to Modify
Permanent Variance by:

CIM Real Assets & Credit Fund DBA RACR
SORA, LLC

OSHSB File No.: 19-V-198M1
Proposed Decision Dated: March 24, 2022

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached
PROPOSED DECISION by Autumn Gonzalez, Hearing Officer.

DAVID THOMAS, Chairman

BARBARA BURGEL, Member

KATHLEEN CRAWFORD, Member

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date of Adoption: April 21, 2022

THE FOREGOING VARIANCE DECISION WAS
ADOPTED ON THE DATE INDICATED ABOVE.
IF YOU ARE DISSATISFIED WITH THE
DECISION, A PETITION FOR REHEARING
MAY BE FILED BY ANY PARTY WITH THE
STANDARDS BOARD WITHIN TWENTY (20)
DAYS AFTER SERVICE OF THE DECISION.
YOUR PETITION FOR REHEARING MUST
FULLY COMPLY WITH THE REQUIREMENTS
OF CALIFORNIA CODE OF REGULATIONS,
TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be
posted for the Applicant's employees to
read, and/or a copy thereof must be
provided to the employees' Authorized
Representatives.

BEFORE THE
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
DEPARTMENT OF INDUSTRIAL RELATIONS
STATE OF CALIFORNIA

In the Matter of Application for Permanent Variance Regarding: CIM Real Assets & Credit Fund DBA RACR SORA, LLC	OSHSB File Nos.: 19-V-198M1 <u>PROPOSED DECISION</u> Hearing Date: March 23, 2022
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A. Subject Matter

1. The following person or entity (“Applicant”) has applied for a modification of permanent variance from provision of the Elevator Safety Orders, found at title 8 of the California Code of Regulations, for subject elevators identified herein:

Preexisting OSHSB File No.	Preexisting Variance Holder of Record
19-V-198	MDP Realty Inc.

B. Jurisdiction

1. This proceeding is conducted in accordance with the Labor Code section 143, and California Code of Regulations, title 8, section 401, et. seq.

C. Procedural

1. This hearing was held on March 23, 2022, in Sacramento, California, via teleconference, by delegation of the Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Autumn Gonzalez, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with section 426.
2. At the hearing, Jennifer Linares, appeared on behalf of the Applicant’s representative, the Schindler Elevator Corporation; Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”); and Michael Nelmidia appeared on behalf of Board staff, in a technical advisory role apart from the Board. Oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence:

Proposed Variance Decision

CIM Real Assets & Credit Fund DBA RACR SORA, LLC

Hearing Date: March 23, 2022

Exhibit Number	Description of Exhibit
PD-1	Permanent variance applications per section A.1 table
PD-2	OSHSB Notice of Hearing
PD-3	Board Staff Reviews of Variance Application
PD-4	Division Reviews of Variance Application
PD-5	Review Draft-1 Proposed Decision

Official notice is taken of the Board’s rulemaking recordings and variance decisions concerning the safety order requirements at issue. At close of hearing on March 23, 2022, the record was closed, and the matter taken under submission by the Hearing Officer.

D. Findings of Fact

1. Based on the record of this hearing, the Board makes the following findings of fact:
 - a. The Applicant request modification of the Board’s records to change from “MDP Realty Inc.” to “CIM Real Assets & Credit Fund DBA RACR SORA, LLC”, the variance holder of record previously granted Permanent Variance Nos. 19-V-198.
 - b. Application section 3, declared to be wholly truthful under penalty of perjury by the Applicant signatory, states facts upon which to reasonably find that presently CIM Real Assets & Credit Fund DBA RACR SORA, LLC is the owner of the property at the variance location of record in Permanent Variance No. 19-V-198M1.
 - c. The Division has evaluated the request for modification (see Exhibit PD-4), finds no issue with it, and recommends the application for modification be granted subject to the same conditions of the Decision and Order in Permanent Variance Nos. 19-V-198.
 - d. The Board finds the above section D.1.b, referenced document to be credible , uncontroverted, and consistent with available, sufficient facts, and of no bearing upon the findings of equivalent occupational health and safety upon which Grant of preexisting Permanent Variance 19-V-198 was, in significant part, based.

E. Decision and Order

1. Variance application 19-V-198M1 is conditionally GRANTED, as specified below, such that henceforth the permanent variance holder of record in Permanent Variance Nos. 19-V-198 and 19-V-198M1, shall be:

CIM Real Assets & Credit Fund DBA RACR SORA, LLC

Proposed Variance Decision

CIM Real Assets & Credit Fund DBA RACR SORA, LLC

Hearing Date: March 23, 2022

2. Permanent Variance No. 19-V-198 only being modified as to the variance holder of record, otherwise is unchanged and remaining in full force and effect, as hereby incorporated by reference into the present Decision and Order.

Pursuant to California Code of Regulations, title 8, section 426(b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

Dated: March 24, 2022



Autumn Gonzalez, Hearing Officer

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application to Modify
Permanent Variance by:

SJ 1WSC LLC

OSHSB File No.: 20-V-002M2
Proposed Decision Dated: March 24, 2022

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached
PROPOSED DECISION by Autumn Gonzalez, Hearing Officer.

DAVID THOMAS, Chairman

BARBARA BURGEL, Member

KATHLEEN CRAWFORD, Member

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date of Adoption: April 21, 2022

THE FOREGOING VARIANCE DECISION WAS
ADOPTED ON THE DATE INDICATED ABOVE.
IF YOU ARE DISSATISFIED WITH THE
DECISION, A PETITION FOR REHEARING
MAY BE FILED BY ANY PARTY WITH THE
STANDARDS BOARD WITHIN TWENTY (20)
DAYS AFTER SERVICE OF THE DECISION.
YOUR PETITION FOR REHEARING MUST
FULLY COMPLY WITH THE REQUIREMENTS
OF CALIFORNIA CODE OF REGULATIONS,
TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be
posted for the Applicant's employees to
read, and/or a copy thereof must be
provided to the employees' Authorized
Representatives.

BEFORE THE
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
DEPARTMENT OF INDUSTRIAL RELATIONS
STATE OF CALIFORNIA

In the Matter of Application to Modify Permanent Variance by: SJ 1WSC LLC	OSHSB File No.: 20-V-002M2 <u>PROPOSED DECISION</u> Hearing Date: March 23, 2022
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A. Subject Matter and Jurisdiction:

1. The above named person or entity (“Applicant”) has applied for a modification of permanent variance from provisions of the Elevator Safety Orders, found at Title 8 of the California Code of Regulations. The subject permanent variance file, and preexisting variance holder of record therein, are as follows:

Preexisting OSHSB File No.	Preexisting Variance Holder of Record
20-V-002	SJ North 1st LLC
20-V-002M1	SJ North 1st LLC

- B. This proceeding is conducted in accordance with Labor Code section 143, and California Code of Regulations, title 8, section 401, et. seq.

C. Procedural Matters:

1. This hearing was held on March 23, 2022, in Sacramento, California, via teleconference, by Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Autumn Gonzalez, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with California Code of Regulations, title 8, section 426.
2. At the hearing, Andrew Ferris, with TK Elevator, appeared on behalf of the Applicant; Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”); and Michael Nelmda appeared on behalf of Board staff, in a technical advisory role apart from the Board.

3. Documentary and oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence:

Exhibit Number	Description of Exhibit
PD-1	Application for modification of Permanent Variance
PD-2	OSHSB Notice of Hearing
PD-3	Board Staff Review of Variance Application
PD-4	Division Review of Variance Application
PD-5	Review Draft-1 Proposed Decision

Official notice is taken of the Board's files, records, recordings and decisions concerning the Elevator Safety Order requirements from which variance shall issue. On March 23, 2022, the hearing and record closed, and the matter was taken under submission by the Hearing Officer.

- D. Based on the record of this hearing, the Board makes the following findings of fact:

1. The Applicant requests modification of the variance holder specified within Board records for each elevator the subject of previously granted Permanent Variance No. 20-V-002 and 20-V-002M1.
2. Application Section 3, declared to be wholly truthful under penalty of perjury by Application signatory, states that the person or entity named in Application Section 1, SJ 1WSC LLC, became the owner of the conveyance(s) subject to the existing variance referenced in Application Section 2, as the term conveyance owner is defined per California Code of Regulations, Title 8, Section 403(o).
3. The Division has evaluated the request for modification of person or entity of record holding Permanent Variance No. 20-V-002 and 20-V-002M1, finds no issue with it, and recommends that the application for modification be granted subject to the same conditions of the Decision and Order in OSHSB Permanent Variance File No. 20-V-002 and 20-V-002M1.
4. The Board finds the Application Section 3, declaratory statements of the Applicant signatory to be credible, uncontroverted, and consistent with available, sufficient facts, and of no bearing as to the finding of equivalent occupational health and safety upon which, in substantial part, grant of preexisting Permanent Variance No. 20-V-002 and 20-V-002M1 was based.

5. The Board finds the current person or entity having custody of each elevator the subject of Permanent Variance No. 20-V-002 and 20-V-002M1, to be in fact:

SJ 1WSC LLC

E. Decision and Order:

1. Variance application 20-V-002M2 is conditionally GRANTED, as specified below, such that, within Board records, the person or entity holding Permanent Variance No. 20-V-002, 20-V-002M1, and Permanent Variance No. 20-V-002M2, shall be:

SJ 1WSC LLC

2. Permanent Variance No. 20-V-002 and 20-V-002M1, being only modified as specified in above Decision and Order section 1, is otherwise unchanged and remaining in full force and effect, as hereby incorporated by reference into this Decision and Order of Permanent Variance No. 20-V-002M2.

Pursuant to California Code of Regulations, title 8, section 426(b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

Dated: March 24, 2022



Autumn Gonzalez, Hearing Officer

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application to Modify
Permanent Variance by:

1554 Market St Development LLC

OSHSB File No.: 20-V-112M1
Proposed Decision Dated: March 24, 2022

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached
PROPOSED DECISION by Autumn Gonzalez, Hearing Officer.

DAVID THOMAS, Chairman

BARBARA BURGEL, Member

KATHLEEN CRAWFORD, Member

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date of Adoption: April 21, 2022

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YOUR PETITION FOR REHEARING MUST
FULLY COMPLY WITH THE REQUIREMENTS
OF CALIFORNIA CODE OF REGULATIONS,
TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be
posted for the Applicant's employees to
read, and/or a copy thereof must be
provided to the employees' Authorized
Representatives.

BEFORE THE
 OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
 DEPARTMENT OF INDUSTRIAL RELATIONS
 STATE OF CALIFORNIA

In the Matter of Application to Modify Permanent Variance by: 1554 Market St Development LLC	OSHSB File No.: 20-V-112M1 <u>PROPOSED DECISION</u> Hearing Date: March 23, 2022
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A. The following person or entity (“Applicant”) has applied for a modification of permanent variance from provisions of the Elevator Safety Orders, found at Title 8 of the California Code of Regulations, for each elevator having the specified preexisting variance location address of record:

Preexisting OSHSB File No.	Applicant Name	Preexisting Variance Address of Record
20-V-112	1554 Market St Development LLC	1554 Market St San Francisco, CA

B. This proceeding is conducted in accordance with Labor Code Section 143, and California Code of Regulations, Title 8, Section 401, et. seq.

C. Procedural Matters:

1. This hearing was held on March 23, 2022, in Sacramento, California, via teleconference, by Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Autumn Gonzalez, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with California Code of Regulations, Title 8, Section 426.
2. At the hearing, Wolter Geesink with Otis Elevator Company, and Dan Leacox of Leacox & Associates, appeared on behalf of the Applicant; Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”); and Michael Nelmidia appeared on behalf of Board staff in a technical advisory role apart from the Board.

3. Documentary and oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence:

Exhibit Number	Description of Exhibit
PD-1	Application for modification of Permanent Variance
PD-2	OSHSB Notice of Hearing
PD-3	Board Staff Reviews of Variance Application
PD-4	Division Reviews of Variance Application
PD-5	Review Draft-1 Proposed Decision

Official notice is taken of the Board’s rulemaking records and variance decisions concerning the safety order provisions from which variance has been requested. On March 23, 2022, the hearing and record closed, and the matter was taken under submission by the Hearing Officer.

D. Based on the record of this hearing, the Board makes the following findings of fact:

1. The Applicant requests modification of the address of the unchanging variance location specified within Board records for each conveyance the subject of previously granted Permanent Variance 20-V-112.
2. Application Section 3, declared to be wholly truthful under penalty of perjury by Application signatory, states facts upon which reasonably may be based a finding that the address, specified in the records of the Board, at which Permanent Variance 20-V-112 is in effect, in fact is more completely, and correctly the different address information specified in below subsection D.5.
3. The Division has evaluated the request for modification of variance location address, finds no issue with it, and recommends that the application for modification be granted subject to the same conditions of the Decision and Order in OSHSB Permanent Variance File No. 20-V-112.
4. The Board finds the above subpart D.2 referenced declaration to be credible, uncontroverted, and consistent with available, sufficient facts, and of no bearing as to the finding of equivalent occupational health and safety upon which Grant of preexisting Permanent Variance 20-V-112 was, in part, based.
5. The Board finds the correct address by which to designate the location of each conveyance the subject of Permanent Variance No. 20-V-112, to be:

55 Oak Street
San Francisco, CA

E. Decision and Order:

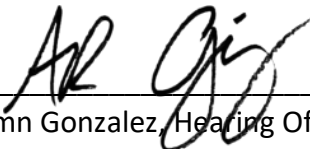
1. Permanent Variance Application No. 20-V-112M1 is conditionally GRANTED, thereby modifying Board records, such that, without change in variance location, each conveyance being the subject of Permanent Variance Nos. 20-V-112, and 20-V-112M1, shall have the following address designation:

55 Oak Street
San Francisco, CA

2. Permanent Variance No. 20-V-112, being only modified as to the subject location address specified in above Decision and Order Section 1, is otherwise unchanged and remaining in full force and effect, as hereby incorporated by reference into this Decision and Order of Permanent Variance No. 20-V-112M1.

Pursuant to California Code of Regulations, Title 8, Section 426(b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

Dated: March 24, 2022



Autumn Gonzalez, Hearing Officer

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application to Modify
Permanent Variance by:

The Kavli Foundation

OSHSB File No.: 20-V-432M1
Proposed Decision Dated: March 24, 2022

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached
PROPOSED DECISION by Autumn Gonzalez, Hearing Officer.

DAVID THOMAS, Chairman

BARBARA BURGEL, Member

KATHLEEN CRAWFORD, Member

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date of Adoption: April 21, 2022

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DECISION, A PETITION FOR REHEARING
MAY BE FILED BY ANY PARTY WITH THE
STANDARDS BOARD WITHIN TWENTY (20)
DAYS AFTER SERVICE OF THE DECISION.
YOUR PETITION FOR REHEARING MUST
FULLY COMPLY WITH THE REQUIREMENTS
OF CALIFORNIA CODE OF REGULATIONS,
TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be
posted for the Applicant's employees to
read, and/or a copy thereof must be
provided to the employees' Authorized
Representatives.

BEFORE THE
 OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
 DEPARTMENT OF INDUSTRIAL RELATIONS
 STATE OF CALIFORNIA

In the Matter of Application to Modify Permanent Variance by: <p style="text-align: center;">The Kavli Foundation</p>	OSHSB File No.: 20-V-432M1 <p style="text-align: center;"><u>PROPOSED DECISION</u></p> Hearing Date: March 23, 2022
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A. The following person or entity (“Applicant”) has applied for a modification of permanent variance from provisions of the Elevator Safety Orders, found at title 8 of the California Code of Regulations, for each elevator having the specified preexisting variance location address of record:

Preexisting OSHSB File No.	Applicant Name	Preexisting Variance Address of Record
20-V-432	The Kavli Foundation	5719 Mesmer Ave. Culver City, CA

B. This proceeding is conducted in accordance with Labor Code section 143, and California Code of Regulations, title 8, section 401, et. seq.

C. Procedural Matters:

1. This hearing was held on March 23, 2022, in Sacramento, California, via teleconference, by Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Autumn Gonzalez, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with California Code of Regulations, title 8, section 426.
2. At the hearing, Jennifer Linares, appeared on behalf of the Applicant’s representative, the Schindler Elevator Corporation; Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”); and Michael Nelmidia appeared on behalf of Board staff, in a technical advisory role apart from the Board.

3. Documentary and oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence:

Exhibit Number	Description of Exhibit
PD-1	Application for modification of Permanent Variance
PD-2	OSHSB Notice of Hearing
PD-3	Board Staff Review of Variance Application
PD-4	Division Review of Variance Application
PD-5	Review Draft-1 Proposed Decision

Official notice is taken of the Board's files, records, recordings and decisions concerning the Elevator Safety Order requirements from which variance shall issue. On March 23, 2022, the hearing and record closed, and the matter was taken under submission by the Hearing Officer.

- D. Based on the record of this hearing, the Board makes the following findings of fact:

1. The Applicant requests modification of the address of the unchanging variance location specified within Board records for each elevator the subject of previously granted Permanent Variance 20-V-432.
2. Application section 3, declared to be wholly truthful under penalty of perjury by Application signatory, states facts upon which reasonably may be based a finding that the address, specified in the records of the Board, at which Permanent Variance 20-V-432 is in effect, in fact is more completely, and correctly the different combination of addresses specified in below subsection D.5.
3. The Division has evaluated the request for modification of variance location address, finds no issue with it, and recommends that the application for modification be granted subject to the same conditions of the Decision and Order in OSHSB Permanent Variance File No. 20-V-432.
4. The Board finds the above subpart D.2 referenced declaration to be credible, uncontroverted, and consistent with available, sufficient facts, and of no bearing as to the finding of equivalent occupational health and safety upon which Grant of preexisting Permanent Variance 20-V-432 was, in part, based.
5. The Board finds the correct address by which to designate the location of each elevator the subject of Permanent Variance No. 20-V-432, to be:

Unit 1
5719 S Mesmer Ave
Los Angeles, CA

Unit 2
5707 S Mesmer Ave
Los Angeles, CA

E. Decision and Order:

1. Permanent Variance Application No. 20-V-432M1 is conditionally GRANTED, thereby modifying Board records, such that, without change in variance location, each elevator being the subject of Permanent Variance Nos. 20-V-432, and 20-V-432M1, shall have the following address designation:

Unit 1
5719 S Mesmer Ave
Los Angeles, CA

Unit 2
5707 S Mesmer Ave
Los Angeles, CA

2. Permanent Variance No. 20-V-432, being only modified as to the subject location address specified in above Decision and Order section 1, is otherwise unchanged and remaining in full force and effect, as hereby incorporated by reference into this Decision and Order of Permanent Variance No. 20-V-432M1.

Pursuant to California Code of Regulations, title 8, section 426(b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

Dated: March 24, 2021



Autumn Gonzalez, Hearing Officer

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application to Modify
Permanent Variance by:

Wonderful Real Estate Development, LLC

OSHSB File No.: 21-V-262M1
Proposed Decision Dated: March 24, 2022

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached
PROPOSED DECISION by Autumn Gonzalez, Hearing Officer.

DAVID THOMAS, Chairman

BARBARA BURGEL, Member

KATHLEEN CRAWFORD, Member

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date of Adoption: April 21, 2022

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YOUR PETITION FOR REHEARING MUST
FULLY COMPLY WITH THE REQUIREMENTS
OF CALIFORNIA CODE OF REGULATIONS,
TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be
posted for the Applicant's employees to
read, and/or a copy thereof must be
provided to the employees' Authorized
Representatives.

BEFORE THE
 OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
 DEPARTMENT OF INDUSTRIAL RELATIONS
 STATE OF CALIFORNIA

In the Matter of Application for Modification of Permanent Variance by: Wonderful Real Estate Development, LLC	OSHSB File No.: 21-V-262M1 <u>PROPOSED DECISION</u> Hearing Date: March 23, 2022
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A. Procedural and Jurisdictional Matters

1. Wonderful Real Estate Development, LLC (“Applicant”) has applied for a modification of permanent variance from provisions of title 8 of the California Code of Regulations.*
2. This proceeding is conducted in accordance with Labor Code section 143, and section 401, et. seq.
3. This hearing was held on March 23, 2022, in Sacramento, California, and via audio/video conference link, by the Occupational Safety and Health Standards Board (Board), with Hearing Officer Autumn Gonzalez, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with section 426.
4. At the hearing, Jennifer Linares, with the Schindler Elevator Company, appeared on behalf of each Applicant; Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”), and Michael Nelmda appeared on behalf of Board staff, in a technical advisory role apart from the Board.
5. Oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence:

Exhibit Number	Description of Exhibit
PD-1	Permanent variance applications per section A.1 table
PD-2	OSHSB Notice of Hearing
PD-3	Board Staff Reviews of Variance Application
PD-4	Division Reviews of Variance Application
PD-5	Review Draft-1 Proposed Decision

Official notice is taken of the Board’s rulemaking records, and variance decisions concerning the safety order requirements from which variance is requested. At close of hearing on March 23, 2022, the record was closed, and the matter taken under submission by the Hearing Officer.

* Unless otherwise noted, all references are to California Code of Regulations, title 8.

B. Findings of Fact

1. On September 16, 2021, the Occupational Safety and Health Standards Board granted a permanent variance (OSHSB File No. 21-V-262) to Wonderful Real Estate Development, LLC for one Schindler 3300 elevator located at 4050 7th Standard Rd., Shafter, California.
2. Conditions and limitations, specified in the Final Decision and Order, include:
 - Suspension Means: 2.20.1, 2.20.2.1, 2.20.2.2(a), 2.20.2.2(f), 2.20.3, 2.20.4, 2.20.9.3.4, and 2.20.9.5.4 (Only to the extent necessary to permit the use of the Elastomeric-coated Steel Belts proposed by the Applicant, in lieu of circular steel suspension ropes);
 - Inspection transfer switch: 2.26.1.4.4(a) (Only to the extent necessary to permit the inspection transfer switch to reside at a location other than the machine room);
 - Seismic reset switch: 8.4.10.1.1(a)(2)(b) (Only to the extent necessary to permit the seismic reset switch to reside at a location other than the machine room);
 - Car-Top Railing: 2.14.1.7.1 (Only to the extent necessary to permit the use of the car-top railing system proposed by the Applicant, where the railing system is located inset from the elevator car top perimeter); and
 - Means of Removing Power: 2.26.9.6.1 (Only to the extent necessary to permit the use of SIL rated devices and circuits as a means to remove power from the AC driving motor, where the redundant monitoring of electrical protective devices is required by the Elevator Safety Orders).
3. Due to the use of a 6 mm (0.25 in.) governor rope with 6-strand construction, the provided governor-sheave pitch diameter is less than that required by the Elevator Safety Orders. The Applicant intends to install a governor rope that provides an increased factor of safety in order to compensate for the use of a governor sheave of reduced diameter.
4. The applicant is seeking to amend the existing permanent variance to include a permanent variance from section 3141 [ASME A17.1-2004, Section 2.18.7.4] of the Elevator Safety Orders regarding governor-sheave diameter for the one (1) elevator located at the address of record.
5. The requested modification provides equivalent safety to the existing Elevator Safety Orders specified above.

C. Decision and Order:

The permanent variance is GRANTED subject to the same conditions stated in OSHSB File No. 21-V-262 (Conditions 1 – 8), along with the additional conditions and limitations noted below.

Elevator Safety Orders: Section 3141

- Pitch Diameter: 2.18.7.4 (Only to the extent necessary to permit the use of the speed governor system proposed by the Applicant, where the rope sheave pitch diameter is reduced to 200 mm [7.87 in.]);

9. The speed governor rope and sheaves shall comply with the following:

- a. The governor shall be used in conjunction with a steel 6 mm (0.25 in.) diameter governor rope with 6-strand, regular lay construction.
- b. The governor rope shall have a factor of safety of 8 or greater as related to the strength necessary to activate the safety.
- c. The governor sheaves shall have a pitch diameter of not less than 200 mm (7.87 in.).

Pursuant to section 426, subdivision (b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

DATED: March 24, 2022


Autumn Gonzalez, Hearing Officer

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application to Modify
Permanent Variance by:

Ramesta Hospitality

OSHSB File No.: 21-V-371M1
Proposed Decision Dated: March 24, 2022

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached
PROPOSED DECISION by Autumn Gonzalez, Hearing Officer.

DAVID THOMAS, Chairman

BARBARA BURGEL, Member

KATHLEEN CRAWFORD, Member

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date of Adoption: April 21, 2022

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OF CALIFORNIA CODE OF REGULATIONS,
TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be
posted for the Applicant's employees to
read, and/or a copy thereof must be
provided to the employees' Authorized
Representatives.

BEFORE THE
 OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
 DEPARTMENT OF INDUSTRIAL RELATIONS
 STATE OF CALIFORNIA

In the Matter of Application to Modify Permanent Variance by: <p style="text-align: center;">Ramesta Hospitality</p>	OSHSB File No.: 21-V-371M1 <p style="text-align: center;"><u>PROPOSED DECISION</u></p> Hearing Date: March 23, 2022
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A. The following person or entity (“Applicant”) has applied for a modification of permanent variance from provisions of the Elevator Safety Orders, found at title 8 of the California Code of Regulations, for each elevator having the specified preexisting variance location address of record:

Preexisting OSHSB File No.	Applicant Name	Preexisting Variance Address of Record
21-V-371	Ramesta Hospitality	22101 Hesperion Blvd Hayward, CA

B. This proceeding is conducted in accordance with Labor Code section 143, and California Code of Regulations, title 8, section 401, et. seq.

C. Procedural Matters:

1. This hearing was held on March 23, 2022, in Sacramento, California, via teleconference, by Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Autumn Gonzalez, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with California Code of Regulations, title 8, section 426.
2. At the hearing, Jennifer Linares, appeared on behalf of the Applicant’s representative, the Schindler Elevator Corporation; Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”); and Michael Nelmidia appeared on behalf of Board staff, in a technical advisory role apart from the Board.

3. Documentary and oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence:

Exhibit Number	Description of Exhibit
PD-1	Application for modification of Permanent Variance
PD-2	OSHSB Notice of Hearing
PD-3	Board Staff Review of Variance Application
PD-4	Division Review of Variance Application
PD-5	Review Draft-1 Proposed Decision

Official notice is taken of the Board’s files, records, recordings and decisions concerning the Elevator Safety Order requirements from which variance shall issue. On March 23, 2022, the hearing and record closed, and the matter was taken under submission by the Hearing Officer.

- D. Based on the record of this hearing, the Board makes the following findings of fact:

1. The Applicant requests modification of the address of the unchanging variance location specified within Board records for each elevator the subject of previously granted Permanent Variance 21-V-371.
2. Application section 3, declared to be wholly truthful under penalty of perjury by Application signatory, states facts upon which reasonably may be based a finding that the address, specified in the records of the Board, at which Permanent Variance 21-V-371 is in effect, in fact is more completely, and correctly the different combination of addresses specified in below subsection D.5.
3. The Division has evaluated the request for modification of variance location address, finds no issue with it, and recommends that the application for modification be granted subject to the same conditions of the Decision and Order in OSHSB Permanent Variance File No. 21-V-371.
4. The Board finds the above subpart D.2 referenced declaration to be credible, uncontroverted, and consistent with available, sufficient facts, and of no bearing as to the finding of equivalent occupational health and safety upon which Grant of preexisting Permanent Variance 21-V-371 was, in part, based.
5. The Board finds the correct address by which to designate the location of each elevator the subject of Permanent Variance No. 21-V-371, to be:

22101 Hesperian Boulevard
Hayward, CA

E. Decision and Order:

1. Permanent Variance Application No. 21-V-371M1 is conditionally GRANTED, thereby modifying Board records, such that, without change in variance location, each elevator being the subject of Permanent Variance Nos. 21-V-371, and 21-V-371M1, shall have the following address designation:

22101 Hesperian Boulevard
Hayward, CA

2. Permanent Variance No. 21-V-371, being only modified as to the subject location address specified in above Decision and Order section 1, is otherwise unchanged and remaining in full force and effect, as hereby incorporated by reference into this Decision and Order of Permanent Variance No. 21-V-371M1.

Pursuant to California Code of Regulations, title 8, section 426(b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

Dated: March 24, 2022



Autumn Gonzalez, Hearing Officer

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application for
Permanent Variance by:

San Francisco Bay Area Rapid Transit
District

OSHSB File No.: see Section A.1 table of
Proposed Decision Dated: March 24, 2022

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached
PROPOSED DECISION by Autumn Gonzalez, Hearing Officer.

DAVID THOMAS, Chairman

BARBARA BURGEL, Member

KATHLEEN CRAWFORD, Member

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date of Adoption: April 21, 2022

THE FOREGOING VARIANCE DECISION WAS
ADOPTED ON THE DATE INDICATED ABOVE.
IF YOU ARE DISSATISFIED WITH THE
DECISION, A PETITION FOR REHEARING
MAY BE FILED BY ANY PARTY WITH THE
STANDARDS BOARD WITHIN TWENTY (20)
DAYS AFTER SERVICE OF THE DECISION.
YOUR PETITION FOR REHEARING MUST
FULLY COMPLY WITH THE REQUIREMENTS
OF CALIFORNIA CODE OF REGULATIONS,
TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be
posted for the Applicant's employees to
read, and/or a copy thereof must be
provided to the employees' Authorized
Representatives.

BEFORE THE
 OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
 DEPARTMENT OF INDUSTRIAL RELATIONS
 STATE OF CALIFORNIA

<p>In the Matter of Application for Permanent Variance by:</p> <p style="text-align: center;">San Francisco Bay Area Rapid Transit District</p>	<p>OSHSB File Nos.: See section A.1 table below</p> <p style="text-align: center;"><u>PROPOSED DECISION</u></p> <p>Hearing Date: March 23, 2022</p>
---	---

A. Subject Matter and Jurisdiction:

- Each below listed applicant (“Applicant”) has applied for permanent variance from certain provisions of the Elevator Safety Orders, found at title 8, of the California Code of Regulations¹, with respect to a conveyance, or conveyances, in the listed quantity, at the listed location:

Variance No.	Applicant Name	Variance Location Address	No. of Escalators
21-V-498	San Francisco Bay Area Rapid Transit District	298 Market Street San Francisco, CA	10

- This proceeding is conducted in accordance with Labor Code section 143, and title 8, section 401, et. seq.
- The safety orders at issue are section 3141.11, incorporated ASME A17.1-2004, sections 6.1.4.1., and 6.1.6.4, and section 3141.2 incorporated ASME A17.1-2004, sections 8.7.6.1.1 [8.7.1.1] and 8.7.6.1.6.

B. Process and Procedure:

- This hearing was held on March 23, 2022, in Sacramento, California, via teleconference, by Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Autumn Gonzalez, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with section 426.
- At the hearing, Jennifer Linares, with Schindler Elevator Corporation, appeared on behalf of the Applicants; Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”), and Michael Nelmda appeared on behalf of Board staff, in a technical advisory role apart from the Board.

¹ Unless otherwise noted, all references are to California Code of Regulations, title 8.

3. Oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence:

Exhibit Number	Description of Exhibit
PD-1	Permanent variance applications per section A.1 table
PD-2	OSHSB Notice of Hearing
PD-3	Board Staff Reviews of Variance Application
PD-4	Division Reviews of Variance Application
PD-5	Review Draft-1 Proposed Decision

Official notice is taken of the Board’s rulemaking records, and variance decisions concerning the safety order requirements from which variance is requested. At close of hearing on March 23, 2022, the record was closed, and the matter taken under submission by the Hearing Officer.

C. Findings of Fact

1. Based upon the record of this proceeding, the Board finds the following: Applicant proposes to perform alterations to ten(10) existing escalators that include a “sleep mode” capability that will cause the escalator to run at a reduced speed when not in use to conserve energy. This arrangement does not comply with the Elevator Safety Orders that prohibit the intentional variation of an escalator’s speed after start-up, and thus variance is requested from California Code of Regulations, For this reason, the Applicant requires a permanent variance from the provisions of California Code of Regulations, Title 8, Elevator Safety Orders, Group IV, Section 3141.2 [ASME A17.1-2004 Sections 8.7.6.1.1 (8.7.1.1) and 8.7.6.1.6] with the relevant code sections being ASME A17.1-2004, Sections 6.1.4.1 and 6.1.6.4, regarding the variation of escalator speed and handrail speed monitoring.

2. ASME A17.1-2004, section 8.7.8.1.6 states:

8.7.8.1.6 Handrails. Any alteration to the handrails or handrail system shall require conformance with 6.1.3.2.2, 6.1.3.4.1 through 6.1.3.4.4, 6.1.3.4.6, 6.1.6.3.12, and 6.1.6.4.

3. The Applicant’s proposed “sleep mode” function is similar to other installations for which a permanent variance has been granted (OSHSB File No. 13-V-153). In this previous variance decision it was concluded by the Board, that a variance also be granted from section 3141.11 [ASME A17.1-2004, Section 6.1.6.4] regarding handrail speed monitoring. ASME A17.1-2004, section 6.1.4.1, states:

6.1.4.1 Limits of Speed. The rated speed shall be not more than 0.5 m/s (100 ft/min), measured along the centerline of the steps in the

direction of travel. The speed attained by an escalator after start-up shall not be intentionally varied.

A purpose of this regulation is to ensure that the speed of the escalator during normal operation is kept constant to prevent passengers from losing their balance.

4. The Applicant contends that equivalent safety is achieved through the use of a controller that is capable of varying the escalator drive motor speed in conjunction with dual redundant sensors strategically placed at each end of the unit to detect passenger traffic. When the sensors indicate a lack of traffic approaching the escalator, for a specified amount of time not less than three times the amount of time to transfer a passenger between landings, the control system will initiate the “sleep mode” function, decelerating the escalator to a “crawling speed”, no less than 0.05 m/s (10 ft./min). If passenger traffic is detected while the escalator is in “Sleep Mode,” a signal will be sent to the controller to “wake up” resulting in the escalator accelerating to normal operating speed within 1.5 seconds at a rate no greater than 1 ft/sec².
5. Per Applicant, the sensors used to detect passenger traffic would provide coverage able to detect passengers at a distance greater than a walking person could travel in 2 seconds, which will ensure the escalator is running at normal speed prior to passenger boarding.
6. Applicant proposes that if passenger traffic is detected approaching the escalator opposite the motion of the escalator steps while in “sleep mode”, an alarm will sound and the escalator will exit “sleep mode” and accelerate until it reaches normal operating speed at a rate no greater than 1 ft/sec². This arrangement is intended to discourage passengers from entering the escalator opposite the motion of the steps while at reduced speed.
7. As proposed, the sensors used to detect passenger traffic are to be installed and arranged in a double redundant, fail-safe fashion with two sensors installed at each end of the escalator providing the same coverage field. This arrangement is intended to allow for passenger traffic detection in the case of any single sensor failure and provide for signal comparison by the controller to detect sensor failure. In the event of a detected failure of any one of the passenger traffic sensors, “sleep mode” would be disabled and the escalator would remain at normal operating speed until all sensors have resumed normal function. In addition, the passenger traffic sensors are to be wired to the escalator controller in a fail-safe manner that prevents “sleep mode” activation if the wiring is cut or disconnected.

8. ASME A17.1-2004, section 8.7.6.1.1 states:

8.7.6.1.1. General Requirements. Any alteration to an escalator shall comply with 6.1.6.1, 6.1.6.1.1, 6.1.6.2.1, 6.1.6.3.1, 6.1.6.3.5, 6.1.6.7, 8.7.1.1, and 8.7.1.2.

9. The Division has applied ASME A17.1-2004 section 8.7.6.1.1 (reference to section 8.7.1.1) to the prohibition of intentionally varying the travel speed under section 6.1.4.1.

10. The Division notes in its Review of Application (Exhibit PD-4) that the Applicant proposed “sleep mode” function meets the requirements of ASME A17.1-2010, section 6.1.4.1.2 regarding the varying the speed of an escalator after start-up. For this reason among others identified within the its Review of Application, the Division advises that equivalent or superior safety will be provided by grant of permanent variance in this matter, as conditionally limited per the below Decision and Order.

11. ASME A17.1-2010, section 6.1.4.1.2, states:

Variation of the escalator speed after start-up shall be permitted provided the escalator installation conforms to all of the following:

- (a) The acceleration and deceleration rates shall not exceed 0.3 m/s^2 (1.0 ft/sec^2).
- (b) The rated speed is not exceeded.
- (c) The minimum speed shall be not less than 0.05 m/s (10 ft/min).
- (d) The speed shall not automatically vary during inspection operation.
- (e) Passenger detection means shall be provided at both landings of the escalator such that
 - (1) detection of any approaching passenger shall cause the escalator to accelerate to or maintain the full escalator speed conforming to 6.1.4.1.2(a) through (d)
 - (2) detection of any approaching passenger shall occur sufficiently in advance of boarding to cause the escalator to attain full operating speed before a

passenger walking at normal speed [1.35 m/s (270 ft/min)] reaches the combplate

(3) passenger detection means shall remain active at the egress landing to detect any passenger approaching against the direction of escalator travel and shall cause the escalator to accelerate to full rated speed and sound the alarm (see 6.1.6.3.1) at the approaching landing before the passenger reaches the combplate

(f) Automatic deceleration shall not occur before a period of time has elapsed since the last passenger detection that is greater than 3 times the amount of time necessary to transfer a passenger between landings.

(g) Means shall be provided to detect failure of the passenger detection means and shall cause the escalator to operate at full rated speed only.”

12. The Division states correctly in its Review of Application, that Applicant’s proposed “sleep mode” function is materially similar to other installations for which a permanent variance has been granted (OSHSB File No. 14-V-129). In these previous variance decisions it was concluded that a variance was required from ASME A17.1-2004, section 6.1.6.4 regarding handrail speed monitoring, and the concluding conditional grant of variance provided for the disabling of the handrail-speed monitoring device while the escalator is operating in slow speed “sleep mode.”

13. ASME A17.1-2004, section 6.1.6.4, states:

Handrail Speed Monitoring Device. A handrail speed monitoring device shall be provided that will cause the activation of the alarm required by 6.1.6.3.1(b) without any intentional delay, whenever the speed of either handrail deviates from the step speed by 15% or more. The device shall also cause electric power to be removed from the driving-machine motor and brake when the speed deviation of 15% or more is continuous within a 2 s to 6 s range. The device shall be of the manual-reset type.

The intent of this regulation is to prevent the destabilization of passengers by maintaining the potential relationship of the moving elements with which passengers interaction while riding.

14. The Applicant intends to disable the handrail speed monitoring during sleep mode operation.
15. The Division advises that the proposed “sleep mode” system incorporating the proposed hand rail speed control specifications, subject to all conditions and limitations of the below Decision and Order will provide for safety equivalence.
16. The proposed “sleep mode” system functions and devices are materially comparable to other installations for which permanent variance previously has been granted by the Board (e.g. OSHSB File No. 13-V-153, 14-V-129, 15-V-236, 16-V-069), absent, to the Division’s reported knowledge, adverse effect upon passenger or workplace safety or health.
17. Both Division and Board staff recommend that conditionally limited grant of permanent variance in this matter, per the below Decision and Order, will provide for passenger safety and occupational safety and health equivalent or superior to that would otherwise prevail per the subject Elevator Safety Order requirements.

D. Conclusive Findings:

The above stated procedural prerequisites, legal authority, and factual findings, as further supported by the documentary record and hearing testimony in this matter, provide a substantive and reasonable basis of conclusion that: (1) Applicant has complied with the statutory and regulatory requirements that must be met before an application for permanent variance may be conditionally granted, and (2) a preponderance of the evidence establishes that Applicant’s proposal, subject to all conditions and limitations set forth in the below Decision and Order, will provide equivalent safety and health to that which would prevail upon full compliance with the requirements of the Elevator Safety Orders from which variance is being sought.

E. Decision and Order:

The application is conditionally GRANTED as specified below, and to the limited extent, as of the date the Board adopts this Proposed Decision, the respective section A table specified quantity of Schindler escalators, at the specified location, shall have permanent variance from Applicant requires a permanent variance from the provisions of section 3141.2 [ASME A17.1-2004 Sections 8.7.6.1.1 (8.7.1.1) and 8.7.6.1.6] with the relevant code sections being ASME A17.1-2004, Sections 6.1.4.1 and 6.1.6.4, regarding the variation of escalator speed and handrail speed monitoring, subject to each and all of the following requirements and limitations:

1. The Applicant may intentionally vary the escalator speed and install proximity sensors for traffic detection subject to the following:

- (a) The rate of acceleration and deceleration shall not exceed 0.3 m/s^2 (1 ft/sec^2) when transitioning between speeds.
- (b) Failure of a single proximity sensor including its associated circuitry, shall cause the escalator to revert to its normal operating speed at an acceleration of not more than 0.3 m/s^2 (1 ft/sec^2).
- (c) Automatic deceleration shall not occur before a period of time of not less than three times the time it takes a passenger to ride from one landing to the other at normal speed has elapsed.
- (d) Detection of any passenger shall cause the escalator to reach full speed before a passenger, walking at 4.5 ft/sec , reaches the comb plate.
- (e) The passenger detection means shall detect a person within a sufficient distance along all possible paths to the escalator that do not require climbing over barriers or escalator handrails to assure that the escalator attains full operating speed before a person walking at 4.5 ft/sec reaches the escalator comb plate. The minimum detection distance shall be calculated according to the following formula or alternatively according to Exhibit 1 (Detection Distance Sleep Mode Operation) attached hereto and incorporated herein by this reference:

$$d = (V_f - V_s) \times (V_w / a) \text{ where}$$

$d =$ detection distance (ft)

$V_f =$ normal speed (ft/min) [not to exceed 100 ft/min]

$V_s =$ slow "sleep" speed (ft/min) [not less than 10 ft/min]

$V_w =$ passenger walking speed (4.5 ft/sec)

$a =$ acceleration/deceleration rate (ft/sec^2)[not to exceed 1 ft/sec^2]

- (f) Detection of any passenger approaching against the direction of escalator travel shall cause the escalator to reach full speed before a passenger, walking at 4.5 ft/sec , reaches the comb plate and shall cause the escalator alarm to sound. The sounding of the alarm may include a 3 to 5 second alarm or three 1 second alarm soundings.
- (g) The minimum speed of the escalator shall not be less than 0.05 m/s (10 ft/min). The "sleep mode" functionality shall not affect the escalator inspection operation. The speed of the escalator shall not vary during Inspection Mode.

- (h) There shall be two means of detecting passengers at each end of the escalator for redundancy and for detection of failure in the passenger detection means.
 - (i) The passenger sensors (detectors) at each end of the escalator must be verified by the control system for proper operation in the following manner:
 - 1. If any of the passenger detection sensors remains tripped for at least 5 minutes but no more than 10 minutes, then the control system shall generate a fault to indicate which sensor is faulted while causing the escalator to exit the Sleep Mode and remain at the normal run speed until the faulted sensor begins to function properly.
 - 2. If one of the paired sensors at either end of the escalator does not trip while the other paired sensor trips at least five times but no more than ten times, the control system shall generate a fault to indicate which sensor is faulted while causing the escalator to exit the Sleep Mode and remain at the normal run speed until the faulted sensor begins to function properly.
 - (j) The handrail speed monitoring device required by section 6.1.6.4 may be disabled while the escalator is operating in the slow speed (Sleep Mode) condition.
- 2. The Applicant shall have the controller schematic diagrams available in the control space together with a written explanation of the operation of the controller.
 - 3. An annual test shall be conducted by a Certified Competent Conveyance Mechanic (CCCM) employed by a Certified Qualified Conveyance Company (CQCC) which maintains and services the escalators, to demonstrate that the escalator is transitioning between "Normal Mode" and "Sleep Mode" and back in conformance with the terms of this variance. The instrumentation used shall be capable of allowing the CCCM to determine the acceleration and deceleration rates of the escalator.
 - 4. The results of each annual test required by Condition No. 3 shall be submitted to the appropriate Elevator Unit District Office in tabular and graphic form (speed vs. time).
 - 5. Whenever practicable, as determined by the Applicant and subject to the concurrence of the Division, the variable speed system is to be installed without the installation of new bollards or other such new structures, if the bollards or other structures would impede passenger movement at the destination end of the escalator. If new bollards or other such structures of that sort are constructed in connection with the variable speed

system, the Applicant will take all practicable steps to minimize the impact of same on the movement of passengers at the destination end of the escalator.

6. Any Certified Qualified Conveyance Company (CQCC; elevator contractor) performing inspection, maintenance, servicing or testing of the escalators shall be provided a copy of the variance decision.
7. The Division shall be notified when the escalator is ready for inspection, and the escalator shall be inspected by the Division and a "Permit to Operate" issued before the escalator may be placed in service.
8. The Applicant shall notify its employees or their authorized representative(s), or both, of this order in the same way and to the same extent that employees and authorized representatives are to be notified of docketed permanent variance applications pursuant to sections 411.2 and 411.3.
9. This Decision and Order shall remain in effect unless modified or revoked upon application by the Applicant, affected employee(s), the Division, or by the Board on its own motion, in procedural accordance with section 411, et. seq.

Pursuant to section 426 subdivision (b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

DATED: March 24, 2022



Autumn Gonzalez, Hearing Officer

Exhibit 1
 Detection Distance Sleep Mode Operation
 Acceleration Rate (ft./sec²) vs. Escalator Sleep Mode Speed (ft./min)

	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
1.00	6.76	6.39	6.01	5.64	5.26	4.88	4.51	4.13	3.76	3.38	3.01	2.63	2.25	1.88	1.50	1.13	0.75	0.38	0.00
0.95	7.12	6.72	6.33	5.93	5.54	5.14	4.75	4.35	3.96	3.56	3.16	2.77	2.37	1.98	1.58	1.19	0.79	0.40	0.00
0.90	7.52	7.10	6.68	6.26	5.85	5.43	5.01	4.59	4.18	3.76	3.34	2.92	2.51	2.09	1.67	1.25	0.84	0.42	0.00
0.85	7.96	7.52	7.07	6.63	6.19	5.75	5.30	4.86	4.42	3.98	3.54	3.09	2.65	2.21	1.77	1.33	0.88	0.44	0.00
0.80	8.45	7.98	7.52	7.05	6.58	6.11	5.64	5.17	4.70	4.23	3.76	3.29	2.82	2.35	1.88	1.41	0.94	0.47	0.00
0.75	9.02	8.52	8.02	7.52	7.01	6.51	6.01	5.51	5.01	4.51	4.01	3.51	3.01	2.51	2.00	1.50	1.00	0.50	0.00
0.70	9.66	9.13	8.59	8.05	7.52	6.98	6.44	5.90	5.37	4.83	4.29	3.76	3.22	2.68	2.15	1.61	1.07	0.54	0.00
0.65	10.41	9.83	9.25	8.67	8.09	7.52	6.94	6.36	5.78	5.20	4.62	4.05	3.47	2.89	2.31	1.73	1.16	0.58	0.00
0.60	11.27	10.65	10.02	9.39	8.77	8.14	7.52	6.89	6.26	5.64	5.01	4.38	3.76	3.13	2.51	1.88	1.25	0.63	0.00
0.55	12.30	11.61	10.93	10.25	9.56	8.88	8.20	7.52	6.83	6.15	5.47	4.78	4.10	3.42	2.73	2.05	1.37	0.68	0.00
0.50	13.53	12.78	12.02	11.27	10.52	9.77	9.02	8.27	7.52	6.76	6.01	5.26	4.51	3.76	3.01	2.25	1.50	0.75	0.00
0.45	15.03	14.20	13.36	12.53	11.69	10.86	10.02	9.19	8.35	7.52	6.68	5.85	5.01	4.18	3.34	2.51	1.67	0.84	0.00
0.40	16.91	15.97	15.03	14.09	13.15	12.21	11.27	10.33	9.39	8.45	7.52	6.58	5.64	4.70	3.76	2.82	1.88	0.94	0.00
0.35	19.32	18.25	17.18	16.10	15.03	13.96	12.88	11.81	10.74	9.66	8.59	7.52	6.44	5.37	4.29	3.22	2.15	1.07	0.00
0.30	22.55	21.29	20.04	18.79	17.54	16.28	15.03	13.78	12.53	11.27	10.02	8.77	7.52	6.26	5.01	3.76	2.51	1.25	0.00
0.25	27.05	25.55	24.05	22.55	21.04	19.54	18.04	16.53	15.03	13.53	12.02	10.52	9.02	7.52	6.01	4.51	3.01	1.50	0.00
0.20	33.82	31.94	30.06	28.18	26.30	24.42	22.55	20.67	18.79	16.91	15.03	13.15	11.27	9.39	7.52	5.64	3.76	1.88	0.00
0.15	45.09	42.59	40.08	37.58	35.07	32.57	30.06	27.56	25.05	22.55	20.04	17.54	15.03	12.53	10.02	7.52	5.01	2.51	0.00
0.10	67.64	63.88	60.12	56.36	52.61	48.85	45.09	41.33	37.58	33.82	30.06	26.30	22.55	18.79	15.03	11.27	7.52	3.76	0.00
0.05	135.27	127.76	120.24	112.73	105.21	97.70	90.18	82.67	75.15	67.64	60.12	52.61	45.09	37.58	30.06	22.55	15.03	7.52	0.00

$$d = (V_f - V_s) \times \frac{V_w}{a}$$

d Detection distance (ft.)

V_f Elevator Rated Speed Escalators with rated speeds of 100 ft./min.

V_s Slow Speed[“Sleep mode” Speed] (ft./min.)

V_w Passenger Walking Speed of 4.5 ft./sec.

a Acceleration/Deceleration Rate (ft./sec.²)

Note: 1 ft./min. = 0.0167 ft./sec.

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application for
Permanent Variance by:

San Francisco Bay Area Rapid Transit
District

OSHSB File No.: see Section A.1 table of
Proposed Decision Dated: March 24, 2022

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached
PROPOSED DECISION by Autumn Gonzalez, Hearing Officer.

DAVID THOMAS, Chairman

BARBARA BURGEL, Member

KATHLEEN CRAWFORD, Member

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date of Adoption: April 21, 2022

THE FOREGOING VARIANCE DECISION WAS
ADOPTED ON THE DATE INDICATED ABOVE.
IF YOU ARE DISSATISFIED WITH THE
DECISION, A PETITION FOR REHEARING
MAY BE FILED BY ANY PARTY WITH THE
STANDARDS BOARD WITHIN TWENTY (20)
DAYS AFTER SERVICE OF THE DECISION.
YOUR PETITION FOR REHEARING MUST
FULLY COMPLY WITH THE REQUIREMENTS
OF CALIFORNIA CODE OF REGULATIONS,
TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be
posted for the Applicant's employees to
read, and/or a copy thereof must be
provided to the employees' Authorized
Representatives.

BEFORE THE
 OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
 DEPARTMENT OF INDUSTRIAL RELATIONS
 STATE OF CALIFORNIA

<p>In the Matter of Application for Permanent Variance by:</p> <p style="text-align: center;">San Francisco Bay Area Rapid Transit District</p>	<p>OSHSB File Nos.: See section A.1 table below</p> <p style="text-align: center;"><u>PROPOSED DECISION</u></p> <p>Hearing Date: March 23, 2022</p>
---	---

A. Subject Matter and Jurisdiction:

1. Each below listed applicant (“Applicant”) has applied for permanent variance from certain provisions of the Elevator Safety Orders, found at title 8, of the California Code of Regulations¹, with respect to a conveyance, or conveyances, in the listed quantity, at the listed location:

Variance No.	Applicant Name	Variance Location Address	No. of Escalators
21-V-499	San Francisco Bay Area Rapid Transit District	598 Market Street San Francisco, CA	8

2. This proceeding is conducted in accordance with Labor Code section 143, and title 8, section 401, et. seq.
3. The safety orders at issue are section 3141.11, incorporated ASME A17.1-2004, sections 6.1.4.1., and 6.1.6.4, and section 3141.2 incorporated ASME A17.1-2004, sections 8.7.6.1.1 [8.7.1.1] and 8.7.6.1.6.

B. Process and Procedure:

1. This hearing was held on March 23, 2022, in Sacramento, California, via teleconference, by Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Autumn Gonzalez, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with section 426.
2. At the hearing, Jennifer Linares, with Schindler Elevator Corporation, appeared on behalf of the Applicants; Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”), and Michael Nelmda appeared on behalf of Board staff, in a technical advisory role apart from the Board.

¹ Unless otherwise noted, all references are to California Code of Regulations, title 8.

3. Oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence:

Exhibit Number	Description of Exhibit
PD-1	Permanent variance applications per section A.1 table
PD-2	OSHSB Notice of Hearing
PD-3	Board Staff Reviews of Variance Application
PD-4	Division Reviews of Variance Application
PD-5	Review Draft-1 Proposed Decision

Official notice is taken of the Board’s rulemaking records, and variance decisions concerning the safety order requirements from which variance is requested. At close of hearing on March 23, 2022, the record was closed, and the matter taken under submission by the Hearing Officer.

C. Findings of Fact

1. Based upon the record of this proceeding, the Board finds the following: Applicant proposes to perform alterations to eight(8) existing escalators that include a “sleep mode” capability that will cause the escalator to run at a reduced speed when not in use to conserve energy. This arrangement does not comply with the Elevator Safety Orders that prohibit the intentional variation of an escalator’s speed after start-up, and thus variance is requested from California Code of Regulations, For this reason, the Applicant requires a permanent variance from the provisions of California Code of Regulations, Title 8, Elevator Safety Orders, Group IV, Section 3141.2 [ASME A17.1-2004 Sections 8.7.6.1.1 (8.7.1.1) and 8.7.6.1.6] with the relevant code sections being ASME A17.1-2004, Sections 6.1.4.1 and 6.1.6.4, regarding the variation of escalator speed and handrail speed monitoring.

2. ASME A17.1-2004, section 8.7.8.1.6 states:

8.7.8.1.6 Handrails. Any alteration to the handrails or handrail system shall require conformance with 6.1.3.2.2, 6.1.3.4.1 through 6.1.3.4.4, 6.1.3.4.6, 6.1.6.3.12, and 6.1.6.4.

3. The Applicant’s proposed “sleep mode” function is similar to other installations for which a permanent variance has been granted (OSHSB File No. 13-V-153). In this previous variance decision it was concluded by the Board, that a variance also be granted from section 3141.11 [ASME A17.1-2004, Section 6.1.6.4] regarding handrail speed monitoring. ASME A17.1-2004, section 6.1.4.1, states:

6.1.4.1 Limits of Speed. The rated speed shall be not more than 0.5 m/s (100 ft/min), measured along the centerline of the steps in the

direction of travel. The speed attained by an escalator after start-up shall not be intentionally varied.

A purpose of this regulation is to ensure that the speed of the escalator during normal operation is kept constant to prevent passengers from losing their balance.

4. The Applicant contends that equivalent safety is achieved through the use of a controller that is capable of varying the escalator drive motor speed in conjunction with dual redundant sensors strategically placed at each end of the unit to detect passenger traffic. When the sensors indicate a lack of traffic approaching the escalator, for a specified amount of time not less than three times the amount of time to transfer a passenger between landings, the control system will initiate the “sleep mode” function, decelerating the escalator to a “crawling speed”, no less than 0.05 m/s (10 ft./min). If passenger traffic is detected while the escalator is in “Sleep Mode,” a signal will be sent to the controller to “wake up” resulting in the escalator accelerating to normal operating speed within 1.5 seconds at a rate no greater than 1 ft/sec².
5. Per Applicant, the sensors used to detect passenger traffic would provide coverage able to detect passengers at a distance greater than a walking person could travel in 2 seconds, which will ensure the escalator is running at normal speed prior to passenger boarding.
6. Applicant proposes that if passenger traffic is detected approaching the escalator opposite the motion of the escalator steps while in “sleep mode”, an alarm will sound and the escalator will exit “sleep mode” and accelerate until it reaches normal operating speed at a rate no greater than 1 ft/sec². This arrangement is intended to discourage passengers from entering the escalator opposite the motion of the steps while at reduced speed.
7. As proposed, the sensors used to detect passenger traffic are to be installed and arranged in a double redundant, fail-safe fashion with two sensors installed at each end of the escalator providing the same coverage field. This arrangement is intended to allow for passenger traffic detection in the case of any single sensor failure and provide for signal comparison by the controller to detect sensor failure. In the event of a detected failure of any one of the passenger traffic sensors, “sleep mode” would be disabled and the escalator would remain at normal operating speed until all sensors have resumed normal function. In addition, the passenger traffic sensors are to be wired to the escalator controller in a fail-safe manner that prevents “sleep mode” activation if the wiring is cut or disconnected.

8. ASME A17.1-2004, section 8.7.6.1.1 states:

8.7.6.1.1. General Requirements. Any alteration to an escalator shall comply with 6.1.6.1, 6.1.6.1.1, 6.1.6.2.1, 6.1.6.3.1, 6.1.6.3.5, 6.1.6.7, 8.7.1.1, and 8.7.1.2.

9. The Division has applied ASME A17.1-2004 section 8.7.6.1.1 (reference to section 8.7.1.1) to the prohibition of intentionally varying the travel speed under section 6.1.4.1.

10. The Division notes in its Review of Application (Exhibit PD-4) that the Applicant proposed “sleep mode” function meets the requirements of ASME A17.1-2010, section 6.1.4.1.2 regarding the varying the speed of an escalator after start-up. For this reason among others identified within the its Review of Application, the Division advises that equivalent or superior safety will be provided by grant of permanent variance in this matter, as conditionally limited per the below Decision and Order.

11. ASME A17.1-2010, section 6.1.4.1.2, states:

Variation of the escalator speed after start-up shall be permitted provided the escalator installation conforms to all of the following:

(a) The acceleration and deceleration rates shall not exceed 0.3 m/s² (1.0 ft/sec²).

(b) The rated speed is not exceeded.

(c) The minimum speed shall be not less than 0.05 m/s (10 ft/min).

(d) The speed shall not automatically vary during inspection operation.

(e) Passenger detection means shall be provided at both landings of the escalator such that

(1) detection of any approaching passenger shall cause the escalator to accelerate to or maintain the full escalator speed conforming to 6.1.4.1.2(a) through (d)

(2) detection of any approaching passenger shall occur sufficiently in advance of boarding to cause the escalator to attain full operating speed before a

passenger walking at normal speed [1.35 m/s (270 ft/min)] reaches the combplate

(3) passenger detection means shall remain active at the egress landing to detect any passenger approaching against the direction of escalator travel and shall cause the escalator to accelerate to full rated speed and sound the alarm (see 6.1.6.3.1) at the approaching landing before the passenger reaches the combplate

(f) Automatic deceleration shall not occur before a period of time has elapsed since the last passenger detection that is greater than 3 times the amount of time necessary to transfer a passenger between landings.

(g) Means shall be provided to detect failure of the passenger detection means and shall cause the escalator to operate at full rated speed only.”

12. The Division states correctly in its Review of Application, that Applicant’s proposed “sleep mode” function is materially similar to other installations for which a permanent variance has been granted (OSHSB File No. 14-V-129). In these previous variance decisions it was concluded that a variance was required from ASME A17.1-2004, section 6.1.6.4 regarding handrail speed monitoring, and the concluding conditional grant of variance provided for the disabling of the handrail-speed monitoring device while the escalator is operating in slow speed “sleep mode.”

13. ASME A17.1-2004, section 6.1.6.4, states:

Handrail Speed Monitoring Device. A handrail speed monitoring device shall be provided that will cause the activation of the alarm required by 6.1.6.3.1(b) without any intentional delay, whenever the speed of either handrail deviates from the step speed by 15% or more. The device shall also cause electric power to be removed from the driving-machine motor and brake when the speed deviation of 15% or more is continuous within a 2 s to 6 s range. The device shall be of the manual-reset type.

The intent of this regulation is to prevent the destabilization of passengers by maintaining the potential relationship of the moving elements with which passengers interaction while riding.

Proposed Variance Decision

OSHSB Variance File No. 21-V-499

Hearing Date: March 23, 2022

14. The Applicant intends to disable the handrail speed monitoring during sleep mode operation.
15. The Division advises that the proposed “sleep mode” system incorporating the proposed hand rail speed control specifications, subject to all conditions and limitations of the below Decision and Order will provide for safety equivalence.
16. The proposed “sleep mode” system functions and devices are materially comparable to other installations for which permanent variance previously has been granted by the Board (e.g. OSHSB File No. 13-V-153, 14-V-129, 15-V-236, 16-V-069), absent, to the Division’s reported knowledge, adverse effect upon passenger or workplace safety or health.
17. Both Division and Board staff recommend that conditionally limited grant of permanent variance in this matter, per the below Decision and Order, will provide for passenger safety and occupational safety and health equivalent or superior to that would otherwise prevail per the subject Elevator Safety Order requirements.

D. Conclusive Findings:

The above stated procedural prerequisites, legal authority, and factual findings, as further supported by the documentary record and hearing testimony in this matter, provide a substantive and reasonable basis of conclusion that: (1) Applicant has complied with the statutory and regulatory requirements that must be met before an application for permanent variance may be conditionally granted, and (2) a preponderance of the evidence establishes that Applicant’s proposal, subject to all conditions and limitations set forth in the below Decision and Order, will provide equivalent safety and health to that which would prevail upon full compliance with the requirements of the Elevator Safety Orders from which variance is being sought.

E. Decision and Order:

The application is conditionally GRANTED as specified below, and to the limited extent, as of the date the Board adopts this Proposed Decision, the respective section A table specified quantity of Schindler escalators, at the specified location, shall have permanent variance from Applicant requires a permanent variance from the provisions of section 3141.2 [ASME A17.1-2004 Sections 8.7.6.1.1 (8.7.1.1) and 8.7.6.1.6] with the relevant code sections being ASME A17.1-2004, Sections 6.1.4.1 and 6.1.6.4, regarding the variation of escalator speed and handrail speed monitoring, subject to each and all of the following requirements and limitations:

1. The Applicant may intentionally vary the escalator speed and install proximity sensors for traffic detection subject to the following:

- (a) The rate of acceleration and deceleration shall not exceed 0.3 m/s^2 (1 ft/sec^2) when transitioning between speeds.
- (b) Failure of a single proximity sensor including its associated circuitry, shall cause the escalator to revert to its normal operating speed at an acceleration of not more than 0.3 m/s^2 (1 ft/sec^2).
- (c) Automatic deceleration shall not occur before a period of time of not less than three times the time it takes a passenger to ride from one landing to the other at normal speed has elapsed.
- (d) Detection of any passenger shall cause the escalator to reach full speed before a passenger, walking at 4.5 ft/sec , reaches the comb plate.
- (e) The passenger detection means shall detect a person within a sufficient distance along all possible paths to the escalator that do not require climbing over barriers or escalator handrails to assure that the escalator attains full operating speed before a person walking at 4.5 ft/sec reaches the escalator comb plate. The minimum detection distance shall be calculated according to the following formula or alternatively according to Exhibit 1 (Detection Distance Sleep Mode Operation) attached hereto and incorporated herein by this reference:

$$d = (V_f - V_s) \times (V_w / a) \text{ where}$$

$d =$ detection distance (ft)

$V_f =$ normal speed (ft/min) [not to exceed 100 ft/min]

$V_s =$ slow "sleep" speed (ft/min) [not less than 10 ft/min]

$V_w =$ passenger walking speed (4.5 ft/sec)

$a =$ acceleration/deceleration rate (ft/sec^2) [not to exceed 1 ft/sec^2]

- (f) Detection of any passenger approaching against the direction of escalator travel shall cause the escalator to reach full speed before a passenger, walking at 4.5 ft/sec , reaches the comb plate and shall cause the escalator alarm to sound. The sounding of the alarm may include a 3 to 5 second alarm or three 1 second alarm soundings.
- (g) The minimum speed of the escalator shall not be less than 0.05 m/s (10 ft/min). The "sleep mode" functionality shall not affect the escalator inspection operation. The speed of the escalator shall not vary during Inspection Mode.

- (h) There shall be two means of detecting passengers at each end of the escalator for redundancy and for detection of failure in the passenger detection means.
 - (i) The passenger sensors (detectors) at each end of the escalator must be verified by the control system for proper operation in the following manner:
 - 1. If any of the passenger detection sensors remains tripped for at least 5 minutes but no more than 10 minutes, then the control system shall generate a fault to indicate which sensor is faulted while causing the escalator to exit the Sleep Mode and remain at the normal run speed until the faulted sensor begins to function properly.
 - 2. If one of the paired sensors at either end of the escalator does not trip while the other paired sensor trips at least five times but no more than ten times, the control system shall generate a fault to indicate which sensor is faulted while causing the escalator to exit the Sleep Mode and remain at the normal run speed until the faulted sensor begins to function properly.
 - (j) The handrail speed monitoring device required by section 6.1.6.4 may be disabled while the escalator is operating in the slow speed (Sleep Mode) condition.
- 2. The Applicant shall have the controller schematic diagrams available in the control space together with a written explanation of the operation of the controller.
 - 3. An annual test shall be conducted by a Certified Competent Conveyance Mechanic (CCCM) employed by a Certified Qualified Conveyance Company (CQCC) which maintains and services the escalators, to demonstrate that the escalator is transitioning between "Normal Mode" and "Sleep Mode" and back in conformance with the terms of this variance. The instrumentation used shall be capable of allowing the CCCM to determine the acceleration and deceleration rates of the escalator.
 - 4. The results of each annual test required by Condition No. 3 shall be submitted to the appropriate Elevator Unit District Office in tabular and graphic form (speed vs. time).
 - 5. Whenever practicable, as determined by the Applicant and subject to the concurrence of the Division, the variable speed system is to be installed without the installation of new bollards or other such new structures, if the bollards or other structures would impede passenger movement at the destination end of the escalator. If new bollards or other such structures of that sort are constructed in connection with the variable speed

system, the Applicant will take all practicable steps to minimize the impact of same on the movement of passengers at the destination end of the escalator.

6. Any Certified Qualified Conveyance Company (CQCC; elevator contractor) performing inspection, maintenance, servicing or testing of the escalators shall be provided a copy of the variance decision.
7. The Division shall be notified when the escalator is ready for inspection, and the escalator shall be inspected by the Division and a "Permit to Operate" issued before the escalator may be placed in service.
8. The Applicant shall notify its employees or their authorized representative(s), or both, of this order in the same way and to the same extent that employees and authorized representatives are to be notified of docketed permanent variance applications pursuant to sections 411.2 and 411.3.
9. This Decision and Order shall remain in effect unless modified or revoked upon application by the Applicant, affected employee(s), the Division, or by the Board on its own motion, in procedural accordance with section 411, et. seq.

Pursuant to section 426 subdivision (b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

DATED: March 24, 2022



Autumn Gonzalez, Hearing Officer

Exhibit 1
 Detection Distance Sleep Mode Operation
 Acceleration Rate (ft./sec²) vs. Escalator Sleep Mode Speed (ft./min)

	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
1.00	6.76	6.39	6.01	5.64	5.26	4.88	4.51	4.13	3.76	3.38	3.01	2.63	2.25	1.88	1.50	1.13	0.75	0.38	0.00
0.95	7.12	6.72	6.33	5.93	5.54	5.14	4.75	4.35	3.96	3.56	3.16	2.77	2.37	1.98	1.58	1.19	0.79	0.40	0.00
0.90	7.52	7.10	6.68	6.26	5.85	5.43	5.01	4.59	4.18	3.76	3.34	2.92	2.51	2.09	1.67	1.25	0.84	0.42	0.00
0.85	7.96	7.52	7.07	6.63	6.19	5.75	5.30	4.86	4.42	3.98	3.54	3.09	2.65	2.21	1.77	1.33	0.88	0.44	0.00
0.80	8.45	7.98	7.52	7.05	6.58	6.11	5.64	5.17	4.70	4.23	3.76	3.29	2.82	2.35	1.88	1.41	0.94	0.47	0.00
0.75	9.02	8.52	8.02	7.52	7.01	6.51	6.01	5.51	5.01	4.51	4.01	3.51	3.01	2.51	2.00	1.50	1.00	0.50	0.00
0.70	9.66	9.13	8.59	8.05	7.52	6.98	6.44	5.90	5.37	4.83	4.29	3.76	3.22	2.68	2.15	1.61	1.07	0.54	0.00
0.65	10.41	9.83	9.25	8.67	8.09	7.52	6.94	6.36	5.78	5.20	4.62	4.05	3.47	2.89	2.31	1.73	1.16	0.58	0.00
0.60	11.27	10.65	10.02	9.39	8.77	8.14	7.52	6.89	6.26	5.64	5.01	4.38	3.76	3.13	2.51	1.88	1.25	0.63	0.00
0.55	12.30	11.61	10.93	10.25	9.56	8.88	8.20	7.52	6.83	6.15	5.47	4.78	4.10	3.42	2.73	2.05	1.37	0.68	0.00
0.50	13.53	12.78	12.02	11.27	10.52	9.77	9.02	8.27	7.52	6.76	6.01	5.26	4.51	3.76	3.01	2.25	1.50	0.75	0.00
0.45	15.03	14.20	13.36	12.53	11.69	10.86	10.02	9.19	8.35	7.52	6.68	5.85	5.01	4.18	3.34	2.51	1.67	0.84	0.00
0.40	16.91	15.97	15.03	14.09	13.15	12.21	11.27	10.33	9.39	8.45	7.52	6.58	5.64	4.70	3.76	2.82	1.88	0.94	0.00
0.35	19.32	18.25	17.18	16.10	15.03	13.96	12.88	11.81	10.74	9.66	8.59	7.52	6.44	5.37	4.29	3.22	2.15	1.07	0.00
0.30	22.55	21.29	20.04	18.79	17.54	16.28	15.03	13.78	12.53	11.27	10.02	8.77	7.52	6.26	5.01	3.76	2.51	1.25	0.00
0.25	27.05	25.55	24.05	22.55	21.04	19.54	18.04	16.53	15.03	13.53	12.02	10.52	9.02	7.52	6.01	4.51	3.01	1.50	0.00
0.20	33.82	31.94	30.06	28.18	26.30	24.42	22.55	20.67	18.79	16.91	15.03	13.15	11.27	9.39	7.52	5.64	3.76	1.88	0.00
0.15	45.09	42.59	40.08	37.58	35.07	32.57	30.06	27.56	25.05	22.55	20.04	17.54	15.03	12.53	10.02	7.52	5.01	2.51	0.00
0.10	67.64	63.88	60.12	56.36	52.61	48.85	45.09	41.33	37.58	33.82	30.06	26.30	22.55	18.79	15.03	11.27	7.52	3.76	0.00
0.05	135.27	127.76	120.24	112.73	105.21	97.70	90.18	82.67	75.15	67.64	60.12	52.61	45.09	37.58	30.06	22.55	15.03	7.52	0.00

$$d = (V_f - V_s) \times \frac{V_w}{a}$$

d Detection distance (ft.)

V_f Elevator Rated Speed Escalators with rated speeds of 100 ft./min.

V_s Slow Speed[“Sleep mode” Speed] (ft./min.)

V_w Passenger Walking Speed of 4.5 ft./sec.

a Acceleration/Deceleration Rate (ft./sec.²)

Note: 1 ft./min. = 0.0167 ft./sec.

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application for
Permanent Variance by:

San Francisco Bay Area Rapid Transit
District

OSHSB File No.: see Section A.1 table of
Proposed Decision Dated: March 24, 2022

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached
PROPOSED DECISION by Autumn Gonzalez, Hearing Officer.

DAVID THOMAS, Chairman

BARBARA BURGEL, Member

KATHLEEN CRAWFORD, Member

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date of Adoption: April 21, 2022

THE FOREGOING VARIANCE DECISION WAS
ADOPTED ON THE DATE INDICATED ABOVE.
IF YOU ARE DISSATISFIED WITH THE
DECISION, A PETITION FOR REHEARING
MAY BE FILED BY ANY PARTY WITH THE
STANDARDS BOARD WITHIN TWENTY (20)
DAYS AFTER SERVICE OF THE DECISION.
YOUR PETITION FOR REHEARING MUST
FULLY COMPLY WITH THE REQUIREMENTS
OF CALIFORNIA CODE OF REGULATIONS,
TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be
posted for the Applicant's employees to
read, and/or a copy thereof must be
provided to the employees' Authorized
Representatives.

BEFORE THE
 OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
 DEPARTMENT OF INDUSTRIAL RELATIONS
 STATE OF CALIFORNIA

<p>In the Matter of Application for Permanent Variance by:</p> <p style="text-align: center;">San Francisco Bay Area Rapid Transit District</p>	<p>OSHSB File Nos.: See section A.1 table below</p> <p style="text-align: center;"><u>PROPOSED DECISION</u></p> <p>Hearing Date: March 23, 2022</p>
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A. Subject Matter and Jurisdiction:

- Each below listed applicant (“Applicant”) has applied for permanent variance from certain provisions of the Elevator Safety Orders, found at title 8, of the California Code of Regulations¹, with respect to a conveyance, or conveyances, in the listed quantity, at the listed location:

Variance No.	Applicant Name	Variance Location Address	No. of Escalators
21-V-501	San Francisco Bay Area Rapid Transit District	899 Market Street San Francisco, CA	5

- This proceeding is conducted in accordance with Labor Code section 143, and title 8, section 401, et. seq.
- The safety orders at issue are section 3141.11, incorporated ASME A17.1-2004, sections 6.1.4.1., and 6.1.6.4, and section 3141.2 incorporated ASME A17.1-2004, sections 8.7.6.1.1 [8.7.1.1] and 8.7.6.1.6.

B. Process and Procedure:

- This hearing was held on March 23, 2022, in Sacramento, California, via teleconference, by Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Autumn Gonzalez, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with section 426.
- At the hearing, Jennifer Linares, with Schindler Elevator Corporation, appeared on behalf of the Applicants; Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”), and Michael Nelmda appeared on behalf of Board staff, in a technical advisory role apart from the Board.

¹ Unless otherwise noted, all references are to California Code of Regulations, title 8.

3. Oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence:

Exhibit Number	Description of Exhibit
PD-1	Permanent variance applications per section A.1 table
PD-2	OSHSB Notice of Hearing
PD-3	Board Staff Reviews of Variance Application
PD-4	Division Reviews of Variance Application
PD-5	Review Draft-1 Proposed Decision

Official notice is taken of the Board’s rulemaking records, and variance decisions concerning the safety order requirements from which variance is requested. At close of hearing on March 23, 2022, the record was closed, and the matter taken under submission by the Hearing Officer.

C. Findings of Fact

1. Based upon the record of this proceeding, the Board finds the following: Applicant proposes to perform alterations to five(5) existing escalators that include a “sleep mode” capability that will cause the escalator to run at a reduced speed when not in use to conserve energy. This arrangement does not comply with the Elevator Safety Orders that prohibit the intentional variation of an escalator’s speed after start-up, and thus variance is requested from California Code of Regulations, For this reason, the Applicant requires a permanent variance from the provisions of California Code of Regulations, Title 8, Elevator Safety Orders, Group IV, Section 3141.2 [ASME A17.1-2004 Sections 8.7.6.1.1 (8.7.1.1) and 8.7.6.1.6] with the relevant code sections being ASME A17.1-2004, Sections 6.1.4.1 and 6.1.6.4, regarding the variation of escalator speed and handrail speed monitoring.

2. ASME A17.1-2004, section 8.7.8.1.6 states:

8.7.8.1.6 Handrails. Any alteration to the handrails or handrail system shall require conformance with 6.1.3.2.2, 6.1.3.4.1 through 6.1.3.4.4, 6.1.3.4.6, 6.1.6.3.12, and 6.1.6.4.

3. The Applicant’s proposed “sleep mode” function is similar to other installations for which a permanent variance has been granted (OSHSB File No. 13-V-153). In this previous variance decision it was concluded by the Board, that a variance also be granted from section 3141.11 [ASME A17.1-2004, Section 6.1.6.4] regarding handrail speed monitoring. ASME A17.1-2004, section 6.1.4.1, states:

6.1.4.1 Limits of Speed. The rated speed shall be not more than 0.5 m/s (100 ft/min), measured along the centerline of the steps in the

direction of travel. The speed attained by an escalator after start-up shall not be intentionally varied.

A purpose of this regulation is to ensure that the speed of the escalator during normal operation is kept constant to prevent passengers from losing their balance.

4. The Applicant contends that equivalent safety is achieved through the use of a controller that is capable of varying the escalator drive motor speed in conjunction with dual redundant sensors strategically placed at each end of the unit to detect passenger traffic. When the sensors indicate a lack of traffic approaching the escalator, for a specified amount of time not less than three times the amount of time to transfer a passenger between landings, the control system will initiate the “sleep mode” function, decelerating the escalator to a “crawling speed”, no less than 0.05 m/s (10 ft./min). If passenger traffic is detected while the escalator is in “Sleep Mode,” a signal will be sent to the controller to “wake up” resulting in the escalator accelerating to normal operating speed within 1.5 seconds at a rate no greater than 1 ft/sec².
5. Per Applicant, the sensors used to detect passenger traffic would provide coverage able to detect passengers at a distance greater than a walking person could travel in 2 seconds, which will ensure the escalator is running at normal speed prior to passenger boarding.
6. Applicant proposes that if passenger traffic is detected approaching the escalator opposite the motion of the escalator steps while in “sleep mode”, an alarm will sound and the escalator will exit “sleep mode” and accelerate until it reaches normal operating speed at a rate no greater than 1 ft/sec². This arrangement is intended to discourage passengers from entering the escalator opposite the motion of the steps while at reduced speed.
7. As proposed, the sensors used to detect passenger traffic are to be installed and arranged in a double redundant, fail-safe fashion with two sensors installed at each end of the escalator providing the same coverage field. This arrangement is intended to allow for passenger traffic detection in the case of any single sensor failure and provide for signal comparison by the controller to detect sensor failure. In the event of a detected failure of any one of the passenger traffic sensors, “sleep mode” would be disabled and the escalator would remain at normal operating speed until all sensors have resumed normal function. In addition, the passenger traffic sensors are to be wired to the escalator controller in a fail-safe manner that prevents “sleep mode” activation if the wiring is cut or disconnected.

8. ASME A17.1-2004, section 8.7.6.1.1 states:

8.7.6.1.1. General Requirements. Any alteration to an escalator shall comply with 6.1.6.1, 6.1.6.1.1, 6.1.6.2.1, 6.1.6.3.1, 6.1.6.3.5, 6.1.6.7, 8.7.1.1, and 8.7.1.2.

9. The Division has applied ASME A17.1-2004 section 8.7.6.1.1 (reference to section 8.7.1.1) to the prohibition of intentionally varying the travel speed under section 6.1.4.1.

10. The Division notes in its Review of Application (Exhibit PD-4) that the Applicant proposed “sleep mode” function meets the requirements of ASME A17.1-2010, section 6.1.4.1.2 regarding the varying the speed of an escalator after start-up. For this reason among others identified within the its Review of Application, the Division advises that equivalent or superior safety will be provided by grant of permanent variance in this matter, as conditionally limited per the below Decision and Order.

11. ASME A17.1-2010, section 6.1.4.1.2, states:

Variation of the escalator speed after start-up shall be permitted provided the escalator installation conforms to all of the following:

(a) The acceleration and deceleration rates shall not exceed 0.3 m/s² (1.0 ft/sec²).

(b) The rated speed is not exceeded.

(c) The minimum speed shall be not less than 0.05 m/s (10 ft/min).

(d) The speed shall not automatically vary during inspection operation.

(e) Passenger detection means shall be provided at both landings of the escalator such that

(1) detection of any approaching passenger shall cause the escalator to accelerate to or maintain the full escalator speed conforming to 6.1.4.1.2(a) through (d)

(2) detection of any approaching passenger shall occur sufficiently in advance of boarding to cause the escalator to attain full operating speed before a

passenger walking at normal speed [1.35 m/s (270 ft/min)] reaches the combplate

(3) passenger detection means shall remain active at the egress landing to detect any passenger approaching against the direction of escalator travel and shall cause the escalator to accelerate to full rated speed and sound the alarm (see 6.1.6.3.1) at the approaching landing before the passenger reaches the combplate

(f) Automatic deceleration shall not occur before a period of time has elapsed since the last passenger detection that is greater than 3 times the amount of time necessary to transfer a passenger between landings.

(g) Means shall be provided to detect failure of the passenger detection means and shall cause the escalator to operate at full rated speed only.”

12. The Division states correctly in its Review of Application, that Applicant’s proposed “sleep mode” function is materially similar to other installations for which a permanent variance has been granted (OSHSB File No. 14-V-129). In these previous variance decisions it was concluded that a variance was required from ASME A17.1-2004, section 6.1.6.4 regarding handrail speed monitoring, and the concluding conditional grant of variance provided for the disabling of the handrail-speed monitoring device while the escalator is operating in slow speed “sleep mode.”

13. ASME A17.1-2004, section 6.1.6.4, states:

Handrail Speed Monitoring Device. A handrail speed monitoring device shall be provided that will cause the activation of the alarm required by 6.1.6.3.1(b) without any intentional delay, whenever the speed of either handrail deviates from the step speed by 15% or more. The device shall also cause electric power to be removed from the driving-machine motor and brake when the speed deviation of 15% or more is continuous within a 2 s to 6 s range. The device shall be of the manual-reset type.

The intent of this regulation is to prevent the destabilization of passengers by maintaining the potential relationship of the moving elements with which passengers interaction while riding.

14. The Applicant intends to disable the handrail speed monitoring during sleep mode operation.
15. The Division advises that the proposed “sleep mode” system incorporating the proposed hand rail speed control specifications, subject to all conditions and limitations of the below Decision and Order will provide for safety equivalence.
16. The proposed “sleep mode” system functions and devices are materially comparable to other installations for which permanent variance previously has been granted by the Board (e.g. OSHSB File No. 13-V-153, 14-V-129, 15-V-236, 16-V-069), absent, to the Division’s reported knowledge, adverse effect upon passenger or workplace safety or health.
17. Both Division and Board staff recommend that conditionally limited grant of permanent variance in this matter, per the below Decision and Order, will provide for passenger safety and occupational safety and health equivalent or superior to that would otherwise prevail per the subject Elevator Safety Order requirements.

D. Conclusive Findings:

The above stated procedural prerequisites, legal authority, and factual findings, as further supported by the documentary record and hearing testimony in this matter, provide a substantive and reasonable basis of conclusion that: (1) Applicant has complied with the statutory and regulatory requirements that must be met before an application for permanent variance may be conditionally granted, and (2) a preponderance of the evidence establishes that Applicant’s proposal, subject to all conditions and limitations set forth in the below Decision and Order, will provide equivalent safety and health to that which would prevail upon full compliance with the requirements of the Elevator Safety Orders from which variance is being sought.

E. Decision and Order:

The application is conditionally GRANTED as specified below, and to the limited extent, as of the date the Board adopts this Proposed Decision, the respective section A table specified quantity of Schindler escalators, at the specified location, shall have permanent variance from Applicant requires a permanent variance from the provisions of section 3141.2 [ASME A17.1-2004 Sections 8.7.6.1.1 (8.7.1.1) and 8.7.6.1.6] with the relevant code sections being ASME A17.1-2004, Sections 6.1.4.1 and 6.1.6.4, regarding the variation of escalator speed and handrail speed monitoring, subject to each and all of the following requirements and limitations:

1. The Applicant may intentionally vary the escalator speed and install proximity sensors for traffic detection subject to the following:

- (a) The rate of acceleration and deceleration shall not exceed 0.3 m/s^2 (1 ft/sec^2) when transitioning between speeds.
- (b) Failure of a single proximity sensor including its associated circuitry, shall cause the escalator to revert to its normal operating speed at an acceleration of not more than 0.3 m/s^2 (1 ft/sec^2).
- (c) Automatic deceleration shall not occur before a period of time of not less than three times the time it takes a passenger to ride from one landing to the other at normal speed has elapsed.
- (d) Detection of any passenger shall cause the escalator to reach full speed before a passenger, walking at 4.5 ft/sec , reaches the comb plate.
- (e) The passenger detection means shall detect a person within a sufficient distance along all possible paths to the escalator that do not require climbing over barriers or escalator handrails to assure that the escalator attains full operating speed before a person walking at 4.5 ft/sec reaches the escalator comb plate. The minimum detection distance shall be calculated according to the following formula or alternatively according to Exhibit 1 (Detection Distance Sleep Mode Operation) attached hereto and incorporated herein by this reference:

$$d = (V_f - V_s) \times (V_w / a) \text{ where}$$

$d =$ detection distance (ft)

$V_f =$ normal speed (ft/min) [not to exceed 100 ft/min]

$V_s =$ slow "sleep" speed (ft/min) [not less than 10 ft/min]

$V_w =$ passenger walking speed (4.5 ft/sec)

$a =$ acceleration/deceleration rate (ft/sec^2) [not to exceed 1 ft/sec^2]

- (f) Detection of any passenger approaching against the direction of escalator travel shall cause the escalator to reach full speed before a passenger, walking at 4.5 ft/sec , reaches the comb plate and shall cause the escalator alarm to sound. The sounding of the alarm may include a 3 to 5 second alarm or three 1 second alarm soundings.
- (g) The minimum speed of the escalator shall not be less than 0.05 m/s (10 ft/min). The "sleep mode" functionality shall not affect the escalator inspection operation. The speed of the escalator shall not vary during Inspection Mode.

- (h) There shall be two means of detecting passengers at each end of the escalator for redundancy and for detection of failure in the passenger detection means.
 - (i) The passenger sensors (detectors) at each end of the escalator must be verified by the control system for proper operation in the following manner:
 - 1. If any of the passenger detection sensors remains tripped for at least 5 minutes but no more than 10 minutes, then the control system shall generate a fault to indicate which sensor is faulted while causing the escalator to exit the Sleep Mode and remain at the normal run speed until the faulted sensor begins to function properly.
 - 2. If one of the paired sensors at either end of the escalator does not trip while the other paired sensor trips at least five times but no more than ten times, the control system shall generate a fault to indicate which sensor is faulted while causing the escalator to exit the Sleep Mode and remain at the normal run speed until the faulted sensor begins to function properly.
 - (j) The handrail speed monitoring device required by section 6.1.6.4 may be disabled while the escalator is operating in the slow speed (Sleep Mode) condition.
- 2. The Applicant shall have the controller schematic diagrams available in the control space together with a written explanation of the operation of the controller.
 - 3. An annual test shall be conducted by a Certified Competent Conveyance Mechanic (CCCM) employed by a Certified Qualified Conveyance Company (CQCC) which maintains and services the escalators, to demonstrate that the escalator is transitioning between "Normal Mode" and "Sleep Mode" and back in conformance with the terms of this variance. The instrumentation used shall be capable of allowing the CCCM to determine the acceleration and deceleration rates of the escalator.
 - 4. The results of each annual test required by Condition No. 3 shall be submitted to the appropriate Elevator Unit District Office in tabular and graphic form (speed vs. time).
 - 5. Whenever practicable, as determined by the Applicant and subject to the concurrence of the Division, the variable speed system is to be installed without the installation of new bollards or other such new structures, if the bollards or other structures would impede passenger movement at the destination end of the escalator. If new bollards or other such structures of that sort are constructed in connection with the variable speed

system, the Applicant will take all practicable steps to minimize the impact of same on the movement of passengers at the destination end of the escalator.

6. Any Certified Qualified Conveyance Company (CQCC; elevator contractor) performing inspection, maintenance, servicing or testing of the escalators shall be provided a copy of the variance decision.
7. The Division shall be notified when the escalator is ready for inspection, and the escalator shall be inspected by the Division and a "Permit to Operate" issued before the escalator may be placed in service.
8. The Applicant shall notify its employees or their authorized representative(s), or both, of this order in the same way and to the same extent that employees and authorized representatives are to be notified of docketed permanent variance applications pursuant to sections 411.2 and 411.3.
9. This Decision and Order shall remain in effect unless modified or revoked upon application by the Applicant, affected employee(s), the Division, or by the Board on its own motion, in procedural accordance with section 411, et. seq.

Pursuant to section 426 subdivision (b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

DATED: March 24, 2022


Autumn Gonzalez, Hearing Officer

Exhibit 1
 Detection Distance Sleep Mode Operation
 Acceleration Rate (ft./sec²) vs. Escalator Sleep Mode Speed (ft./min)

	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
1.00	6.76	6.39	6.01	5.64	5.26	4.88	4.51	4.13	3.76	3.38	3.01	2.63	2.25	1.88	1.50	1.13	0.75	0.38	0.00
0.95	7.12	6.72	6.33	5.93	5.54	5.14	4.75	4.35	3.96	3.56	3.16	2.77	2.37	1.98	1.58	1.19	0.79	0.40	0.00
0.90	7.52	7.10	6.68	6.26	5.85	5.43	5.01	4.59	4.18	3.76	3.34	2.92	2.51	2.09	1.67	1.25	0.84	0.42	0.00
0.85	7.96	7.52	7.07	6.63	6.19	5.75	5.30	4.86	4.42	3.98	3.54	3.09	2.65	2.21	1.77	1.33	0.88	0.44	0.00
0.80	8.45	7.98	7.52	7.05	6.58	6.11	5.64	5.17	4.70	4.23	3.76	3.29	2.82	2.35	1.88	1.41	0.94	0.47	0.00
0.75	9.02	8.52	8.02	7.52	7.01	6.51	6.01	5.51	5.01	4.51	4.01	3.51	3.01	2.51	2.00	1.50	1.00	0.50	0.00
0.70	9.66	9.13	8.59	8.05	7.52	6.98	6.44	5.90	5.37	4.83	4.29	3.76	3.22	2.68	2.15	1.61	1.07	0.54	0.00
0.65	10.41	9.83	9.25	8.67	8.09	7.52	6.94	6.36	5.78	5.20	4.62	4.05	3.47	2.89	2.31	1.73	1.16	0.58	0.00
0.60	11.27	10.65	10.02	9.39	8.77	8.14	7.52	6.89	6.26	5.64	5.01	4.38	3.76	3.13	2.51	1.88	1.25	0.63	0.00
0.55	12.30	11.61	10.93	10.25	9.56	8.88	8.20	7.52	6.83	6.15	5.47	4.78	4.10	3.42	2.73	2.05	1.37	0.68	0.00
0.50	13.53	12.78	12.02	11.27	10.52	9.77	9.02	8.27	7.52	6.76	6.01	5.26	4.51	3.76	3.01	2.25	1.50	0.75	0.00
0.45	15.03	14.20	13.36	12.53	11.69	10.86	10.02	9.19	8.35	7.52	6.68	5.85	5.01	4.18	3.34	2.51	1.67	0.84	0.00
0.40	16.91	15.97	15.03	14.09	13.15	12.21	11.27	10.33	9.39	8.45	7.52	6.58	5.64	4.70	3.76	2.82	1.88	0.94	0.00
0.35	19.32	18.25	17.18	16.10	15.03	13.96	12.88	11.81	10.74	9.66	8.59	7.52	6.44	5.37	4.29	3.22	2.15	1.07	0.00
0.30	22.55	21.29	20.04	18.79	17.54	16.28	15.03	13.78	12.53	11.27	10.02	8.77	7.52	6.26	5.01	3.76	2.51	1.25	0.00
0.25	27.05	25.55	24.05	22.55	21.04	19.54	18.04	16.53	15.03	13.53	12.02	10.52	9.02	7.52	6.01	4.51	3.01	1.50	0.00
0.20	33.82	31.94	30.06	28.18	26.30	24.42	22.55	20.67	18.79	16.91	15.03	13.15	11.27	9.39	7.52	5.64	3.76	1.88	0.00
0.15	45.09	42.59	40.08	37.58	35.07	32.57	30.06	27.56	25.05	22.55	20.04	17.54	15.03	12.53	10.02	7.52	5.01	2.51	0.00
0.10	67.64	63.88	60.12	56.36	52.61	48.85	45.09	41.33	37.58	33.82	30.06	26.30	22.55	18.79	15.03	11.27	7.52	3.76	0.00
0.05	135.27	127.76	120.24	112.73	105.21	97.70	90.18	82.67	75.15	67.64	60.12	52.61	45.09	37.58	30.06	22.55	15.03	7.52	0.00

$$d = (V_f - V_s) \times \frac{V_w}{a}$$

d Detection distance (ft.)

V_f Elevator Rated Speed Escalators with rated speeds of 100 ft./min.

V_s Slow Speed[“Sleep mode” Speed] (ft./min.)

V_w Passenger Walking Speed of 4.5 ft./sec.

a Acceleration/Deceleration Rate (ft./sec.²)

Note: 1 ft./min. = 0.0167 ft./sec.

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application for
Permanent Variance by:

San Francisco Bay Area Rapid Transit
District

OSHSB File No.: see Section A.1 table of
Proposed Decision Dated: March 24, 2022

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached
PROPOSED DECISION by Autumn Gonzalez, Hearing Officer.

DAVID THOMAS, Chairman

BARBARA BURGEL, Member

KATHLEEN CRAWFORD, Member

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date of Adoption: April 21, 2022

THE FOREGOING VARIANCE DECISION WAS
ADOPTED ON THE DATE INDICATED ABOVE.
IF YOU ARE DISSATISFIED WITH THE
DECISION, A PETITION FOR REHEARING
MAY BE FILED BY ANY PARTY WITH THE
STANDARDS BOARD WITHIN TWENTY (20)
DAYS AFTER SERVICE OF THE DECISION.
YOUR PETITION FOR REHEARING MUST
FULLY COMPLY WITH THE REQUIREMENTS
OF CALIFORNIA CODE OF REGULATIONS,
TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be
posted for the Applicant's employees to
read, and/or a copy thereof must be
provided to the employees' Authorized
Representatives.

BEFORE THE
 OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
 DEPARTMENT OF INDUSTRIAL RELATIONS
 STATE OF CALIFORNIA

<p>In the Matter of Application for Permanent Variance by:</p> <p style="text-align: center;">San Francisco Bay Area Rapid Transit District</p>	<p>OSHSB File Nos.: See section A.1 table below</p> <p style="text-align: center;"><u>PROPOSED DECISION</u></p> <p>Hearing Date: March 23, 2022</p>
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A. Subject Matter and Jurisdiction:

- Each below listed applicant (“Applicant”) has applied for permanent variance from certain provisions of the Elevator Safety Orders, found at title 8, of the California Code of Regulations¹, with respect to a conveyance, or conveyances, in the listed quantity, at the listed location:

Variance No.	Applicant Name	Variance Location Address	No. of Escalators
21-V-503	San Francisco Bay Area Rapid Transit District	1150 Market Street San Francisco, CA	6

- This proceeding is conducted in accordance with Labor Code section 143, and title 8, section 401, et. seq.
- The safety orders at issue are section 3141.11, incorporated ASME A17.1-2004, sections 6.1.4.1., and 6.1.6.4, and section 3141.2 incorporated ASME A17.1-2004, sections 8.7.6.1.1 [8.7.1.1] and 8.7.6.1.6.

B. Process and Procedure:

- This hearing was held on March 23, 2022, in Sacramento, California, via teleconference, by Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Autumn Gonzalez, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with section 426.
- At the hearing, Jennifer Linares, with Schindler Elevator Corporation, appeared on behalf of the Applicants; Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”), and Michael Nelmda appeared on behalf of Board staff, in a technical advisory role apart from the Board.

¹ Unless otherwise noted, all references are to California Code of Regulations, title 8.

3. Oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence:

Exhibit Number	Description of Exhibit
PD-1	Permanent variance applications per section A.1 table
PD-2	OSHSB Notice of Hearing
PD-3	Board Staff Reviews of Variance Application
PD-4	Division Reviews of Variance Application
PD-5	Review Draft-1 Proposed Decision

Official notice is taken of the Board’s rulemaking records, and variance decisions concerning the safety order requirements from which variance is requested. At close of hearing on March 23, 2022, the record was closed, and the matter taken under submission by the Hearing Officer.

C. Findings of Fact

1. Based upon the record of this proceeding, the Board finds the following: Applicant proposes to perform alterations to six(6) existing escalators that include a “sleep mode” capability that will cause the escalator to run at a reduced speed when not in use to conserve energy. This arrangement does not comply with the Elevator Safety Orders that prohibit the intentional variation of an escalator’s speed after start-up, and thus variance is requested from California Code of Regulations, For this reason, the Applicant requires a permanent variance from the provisions of California Code of Regulations, Title 8, Elevator Safety Orders, Group IV, Section 3141.2 [ASME A17.1-2004 Sections 8.7.6.1.1 (8.7.1.1) and 8.7.6.1.6] with the relevant code sections being ASME A17.1-2004, Sections 6.1.4.1 and 6.1.6.4, regarding the variation of escalator speed and handrail speed monitoring.

2. ASME A17.1-2004, section 8.7.8.1.6 states:

8.7.8.1.6 Handrails. Any alteration to the handrails or handrail system shall require conformance with 6.1.3.2.2, 6.1.3.4.1 through 6.1.3.4.4, 6.1.3.4.6, 6.1.6.3.12, and 6.1.6.4.

3. The Applicant’s proposed “sleep mode” function is similar to other installations for which a permanent variance has been granted (OSHSB File No. 13-V-153). In this previous variance decision it was concluded by the Board, that a variance also be granted from section 3141.11 [ASME A17.1-2004, Section 6.1.6.4] regarding handrail speed monitoring. ASME A17.1-2004, section 6.1.4.1, states:

6.1.4.1 Limits of Speed. The rated speed shall be not more than 0.5 m/s (100 ft/min), measured along the centerline of the steps in the

direction of travel. The speed attained by an escalator after start-up shall not be intentionally varied.

A purpose of this regulation is to ensure that the speed of the escalator during normal operation is kept constant to prevent passengers from losing their balance.

4. The Applicant contends that equivalent safety is achieved through the use of a controller that is capable of varying the escalator drive motor speed in conjunction with dual redundant sensors strategically placed at each end of the unit to detect passenger traffic. When the sensors indicate a lack of traffic approaching the escalator, for a specified amount of time not less than three times the amount of time to transfer a passenger between landings, the control system will initiate the “sleep mode” function, decelerating the escalator to a “crawling speed”, no less than 0.05 m/s (10 ft./min). If passenger traffic is detected while the escalator is in “Sleep Mode,” a signal will be sent to the controller to “wake up” resulting in the escalator accelerating to normal operating speed within 1.5 seconds at a rate no greater than 1 ft/sec².
5. Per Applicant, the sensors used to detect passenger traffic would provide coverage able to detect passengers at a distance greater than a walking person could travel in 2 seconds, which will ensure the escalator is running at normal speed prior to passenger boarding.
6. Applicant proposes that if passenger traffic is detected approaching the escalator opposite the motion of the escalator steps while in “sleep mode”, an alarm will sound and the escalator will exit “sleep mode” and accelerate until it reaches normal operating speed at a rate no greater than 1 ft/sec². This arrangement is intended to discourage passengers from entering the escalator opposite the motion of the steps while at reduced speed.
7. As proposed, the sensors used to detect passenger traffic are to be installed and arranged in a double redundant, fail-safe fashion with two sensors installed at each end of the escalator providing the same coverage field. This arrangement is intended to allow for passenger traffic detection in the case of any single sensor failure and provide for signal comparison by the controller to detect sensor failure. In the event of a detected failure of any one of the passenger traffic sensors, “sleep mode” would be disabled and the escalator would remain at normal operating speed until all sensors have resumed normal function. In addition, the passenger traffic sensors are to be wired to the escalator controller in a fail-safe manner that prevents “sleep mode” activation if the wiring is cut or disconnected.

8. ASME A17.1-2004, section 8.7.6.1.1 states:

8.7.6.1.1. General Requirements. Any alteration to an escalator shall comply with 6.1.6.1, 6.1.6.1.1, 6.1.6.2.1, 6.1.6.3.1, 6.1.6.3.5, 6.1.6.7, 8.7.1.1, and 8.7.1.2.

9. The Division has applied ASME A17.1-2004 section 8.7.6.1.1 (reference to section 8.7.1.1) to the prohibition of intentionally varying the travel speed under section 6.1.4.1.
10. The Division notes in its Review of Application (Exhibit PD-4) that the Applicant proposed “sleep mode” function meets the requirements of ASME A17.1-2010, section 6.1.4.1.2 regarding the varying the speed of an escalator after start-up. For this reason among others identified within the its Review of Application, the Division advises that equivalent or superior safety will be provided by grant of permanent variance in this matter, as conditionally limited per the below Decision and Order.
11. ASME A17.1-2010, section 6.1.4.1.2, states:

Variation of the escalator speed after start-up shall be permitted provided the escalator installation conforms to all of the following:

- (a) The acceleration and deceleration rates shall not exceed 0.3 m/s^2 (1.0 ft/sec^2).
- (b) The rated speed is not exceeded.
- (c) The minimum speed shall be not less than 0.05 m/s (10 ft/min).
- (d) The speed shall not automatically vary during inspection operation.
- (e) Passenger detection means shall be provided at both landings of the escalator such that
 - (1) detection of any approaching passenger shall cause the escalator to accelerate to or maintain the full escalator speed conforming to 6.1.4.1.2(a) through (d)
 - (2) detection of any approaching passenger shall occur sufficiently in advance of boarding to cause the escalator to attain full operating speed before a

passenger walking at normal speed [1.35 m/s (270 ft/min)] reaches the combplate

(3) passenger detection means shall remain active at the egress landing to detect any passenger approaching against the direction of escalator travel and shall cause the escalator to accelerate to full rated speed and sound the alarm (see 6.1.6.3.1) at the approaching landing before the passenger reaches the combplate

(f) Automatic deceleration shall not occur before a period of time has elapsed since the last passenger detection that is greater than 3 times the amount of time necessary to transfer a passenger between landings.

(g) Means shall be provided to detect failure of the passenger detection means and shall cause the escalator to operate at full rated speed only.”

12. The Division states correctly in its Review of Application, that Applicant’s proposed “sleep mode” function is materially similar to other installations for which a permanent variance has been granted (OSHSB File No. 14-V-129). In these previous variance decisions it was concluded that a variance was required from ASME A17.1-2004, section 6.1.6.4 regarding handrail speed monitoring, and the concluding conditional grant of variance provided for the disabling of the handrail-speed monitoring device while the escalator is operating in slow speed “sleep mode.”

13. ASME A17.1-2004, section 6.1.6.4, states:

Handrail Speed Monitoring Device. A handrail speed monitoring device shall be provided that will cause the activation of the alarm required by 6.1.6.3.1(b) without any intentional delay, whenever the speed of either handrail deviates from the step speed by 15% or more. The device shall also cause electric power to be removed from the driving-machine motor and brake when the speed deviation of 15% or more is continuous within a 2 s to 6 s range. The device shall be of the manual-reset type.

The intent of this regulation is to prevent the destabilization of passengers by maintaining the potential relationship of the moving elements with which passengers interaction while riding.

14. The Applicant intends to disable the handrail speed monitoring during sleep mode operation.
15. The Division advises that the proposed “sleep mode” system incorporating the proposed hand rail speed control specifications, subject to all conditions and limitations of the below Decision and Order will provide for safety equivalence.
16. The proposed “sleep mode” system functions and devices are materially comparable to other installations for which permanent variance previously has been granted by the Board (e.g. OSHSB File No. 13-V-153, 14-V-129, 15-V-236, 16-V-069), absent, to the Division’s reported knowledge, adverse effect upon passenger or workplace safety or health.
17. Both Division and Board staff recommend that conditionally limited grant of permanent variance in this matter, per the below Decision and Order, will provide for passenger safety and occupational safety and health equivalent or superior to that would otherwise prevail per the subject Elevator Safety Order requirements.

D. Conclusive Findings:

The above stated procedural prerequisites, legal authority, and factual findings, as further supported by the documentary record and hearing testimony in this matter, provide a substantive and reasonable basis of conclusion that: (1) Applicant has complied with the statutory and regulatory requirements that must be met before an application for permanent variance may be conditionally granted, and (2) a preponderance of the evidence establishes that Applicant’s proposal, subject to all conditions and limitations set forth in the below Decision and Order, will provide equivalent safety and health to that which would prevail upon full compliance with the requirements of the Elevator Safety Orders from which variance is being sought.

E. Decision and Order:

The application is conditionally GRANTED as specified below, and to the limited extent, as of the date the Board adopts this Proposed Decision, the respective section A table specified quantity of Schindler escalators, at the specified location, shall have permanent variance from Applicant requires a permanent variance from the provisions of section 3141.2 [ASME A17.1-2004 Sections 8.7.6.1.1 (8.7.1.1) and 8.7.6.1.6] with the relevant code sections being ASME A17.1-2004, Sections 6.1.4.1 and 6.1.6.4, regarding the variation of escalator speed and handrail speed monitoring, subject to each and all of the following requirements and limitations:

1. The Applicant may intentionally vary the escalator speed and install proximity sensors for traffic detection subject to the following:

- (a) The rate of acceleration and deceleration shall not exceed 0.3 m/s^2 (1 ft/sec^2) when transitioning between speeds.
- (b) Failure of a single proximity sensor including its associated circuitry, shall cause the escalator to revert to its normal operating speed at an acceleration of not more than 0.3 m/s^2 (1 ft/sec^2).
- (c) Automatic deceleration shall not occur before a period of time of not less than three times the time it takes a passenger to ride from one landing to the other at normal speed has elapsed.
- (d) Detection of any passenger shall cause the escalator to reach full speed before a passenger, walking at 4.5 ft/sec , reaches the comb plate.
- (e) The passenger detection means shall detect a person within a sufficient distance along all possible paths to the escalator that do not require climbing over barriers or escalator handrails to assure that the escalator attains full operating speed before a person walking at 4.5 ft/sec reaches the escalator comb plate. The minimum detection distance shall be calculated according to the following formula or alternatively according to Exhibit 1 (Detection Distance Sleep Mode Operation) attached hereto and incorporated herein by this reference:

$$d = (V_f - V_s) \times (V_w / a) \text{ where}$$

$d =$ detection distance (ft)

$V_f =$ normal speed (ft/min) [not to exceed 100 ft/min]

$V_s =$ slow "sleep" speed (ft/min) [not less than 10 ft/min]

$V_w =$ passenger walking speed (4.5 ft/sec)

$a =$ acceleration/deceleration rate (ft/sec^2)[not to exceed 1 ft/sec^2]

- (f) Detection of any passenger approaching against the direction of escalator travel shall cause the escalator to reach full speed before a passenger, walking at 4.5 ft/sec , reaches the comb plate and shall cause the escalator alarm to sound. The sounding of the alarm may include a 3 to 5 second alarm or three 1 second alarm soundings.
- (g) The minimum speed of the escalator shall not be less than 0.05 m/s (10 ft/min). The "sleep mode" functionality shall not affect the escalator inspection operation. The speed of the escalator shall not vary during Inspection Mode.

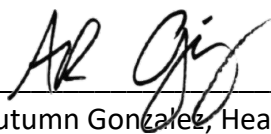
- (h) There shall be two means of detecting passengers at each end of the escalator for redundancy and for detection of failure in the passenger detection means.
 - (i) The passenger sensors (detectors) at each end of the escalator must be verified by the control system for proper operation in the following manner:
 - 1. If any of the passenger detection sensors remains tripped for at least 5 minutes but no more than 10 minutes, then the control system shall generate a fault to indicate which sensor is faulted while causing the escalator to exit the Sleep Mode and remain at the normal run speed until the faulted sensor begins to function properly.
 - 2. If one of the paired sensors at either end of the escalator does not trip while the other paired sensor trips at least five times but no more than ten times, the control system shall generate a fault to indicate which sensor is faulted while causing the escalator to exit the Sleep Mode and remain at the normal run speed until the faulted sensor begins to function properly.
 - (j) The handrail speed monitoring device required by section 6.1.6.4 may be disabled while the escalator is operating in the slow speed (Sleep Mode) condition.
- 2. The Applicant shall have the controller schematic diagrams available in the control space together with a written explanation of the operation of the controller.
 - 3. An annual test shall be conducted by a Certified Competent Conveyance Mechanic (CCCM) employed by a Certified Qualified Conveyance Company (CQCC) which maintains and services the escalators, to demonstrate that the escalator is transitioning between "Normal Mode" and "Sleep Mode" and back in conformance with the terms of this variance. The instrumentation used shall be capable of allowing the CCCM to determine the acceleration and deceleration rates of the escalator.
 - 4. The results of each annual test required by Condition No. 3 shall be submitted to the appropriate Elevator Unit District Office in tabular and graphic form (speed vs. time).
 - 5. Whenever practicable, as determined by the Applicant and subject to the concurrence of the Division, the variable speed system is to be installed without the installation of new bollards or other such new structures, if the bollards or other structures would impede passenger movement at the destination end of the escalator. If new bollards or other such structures of that sort are constructed in connection with the variable speed

system, the Applicant will take all practicable steps to minimize the impact of same on the movement of passengers at the destination end of the escalator.

6. Any Certified Qualified Conveyance Company (CQCC; elevator contractor) performing inspection, maintenance, servicing or testing of the escalators shall be provided a copy of the variance decision.
7. The Division shall be notified when the escalator is ready for inspection, and the escalator shall be inspected by the Division and a "Permit to Operate" issued before the escalator may be placed in service.
8. The Applicant shall notify its employees or their authorized representative(s), or both, of this order in the same way and to the same extent that employees and authorized representatives are to be notified of docketed permanent variance applications pursuant to sections 411.2 and 411.3.
9. This Decision and Order shall remain in effect unless modified or revoked upon application by the Applicant, affected employee(s), the Division, or by the Board on its own motion, in procedural accordance with section 411, et. seq.

Pursuant to section 426 subdivision (b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

DATED: March 24, 2022



Autumn Gonzalez, Hearing Officer

Exhibit 1
 Detection Distance Sleep Mode Operation
 Acceleration Rate (ft./sec²) vs. Escalator Sleep Mode Speed (ft./min)

	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
1.00	6.76	6.39	6.01	5.64	5.26	4.88	4.51	4.13	3.76	3.38	3.01	2.63	2.25	1.88	1.50	1.13	0.75	0.38	0.00
0.95	7.12	6.72	6.33	5.93	5.54	5.14	4.75	4.35	3.96	3.56	3.16	2.77	2.37	1.98	1.58	1.19	0.79	0.40	0.00
0.90	7.52	7.10	6.68	6.26	5.85	5.43	5.01	4.59	4.18	3.76	3.34	2.92	2.51	2.09	1.67	1.25	0.84	0.42	0.00
0.85	7.96	7.52	7.07	6.63	6.19	5.75	5.30	4.86	4.42	3.98	3.54	3.09	2.65	2.21	1.77	1.33	0.88	0.44	0.00
0.80	8.45	7.98	7.52	7.05	6.58	6.11	5.64	5.17	4.70	4.23	3.76	3.29	2.82	2.35	1.88	1.41	0.94	0.47	0.00
0.75	9.02	8.52	8.02	7.52	7.01	6.51	6.01	5.51	5.01	4.51	4.01	3.51	3.01	2.51	2.00	1.50	1.00	0.50	0.00
0.70	9.66	9.13	8.59	8.05	7.52	6.98	6.44	5.90	5.37	4.83	4.29	3.76	3.22	2.68	2.15	1.61	1.07	0.54	0.00
0.65	10.41	9.83	9.25	8.67	8.09	7.52	6.94	6.36	5.78	5.20	4.62	4.05	3.47	2.89	2.31	1.73	1.16	0.58	0.00
0.60	11.27	10.65	10.02	9.39	8.77	8.14	7.52	6.89	6.26	5.64	5.01	4.38	3.76	3.13	2.51	1.88	1.25	0.63	0.00
0.55	12.30	11.61	10.93	10.25	9.56	8.88	8.20	7.52	6.83	6.15	5.47	4.78	4.10	3.42	2.73	2.05	1.37	0.68	0.00
0.50	13.53	12.78	12.02	11.27	10.52	9.77	9.02	8.27	7.52	6.76	6.01	5.26	4.51	3.76	3.01	2.25	1.50	0.75	0.00
0.45	15.03	14.20	13.36	12.53	11.69	10.86	10.02	9.19	8.35	7.52	6.68	5.85	5.01	4.18	3.34	2.51	1.67	0.84	0.00
0.40	16.91	15.97	15.03	14.09	13.15	12.21	11.27	10.33	9.39	8.45	7.52	6.58	5.64	4.70	3.76	2.82	1.88	0.94	0.00
0.35	19.32	18.25	17.18	16.10	15.03	13.96	12.88	11.81	10.74	9.66	8.59	7.52	6.44	5.37	4.29	3.22	2.15	1.07	0.00
0.30	22.55	21.29	20.04	18.79	17.54	16.28	15.03	13.78	12.53	11.27	10.02	8.77	7.52	6.26	5.01	3.76	2.51	1.25	0.00
0.25	27.05	25.55	24.05	22.55	21.04	19.54	18.04	16.53	15.03	13.53	12.02	10.52	9.02	7.52	6.01	4.51	3.01	1.50	0.00
0.20	33.82	31.94	30.06	28.18	26.30	24.42	22.55	20.67	18.79	16.91	15.03	13.15	11.27	9.39	7.52	5.64	3.76	1.88	0.00
0.15	45.09	42.59	40.08	37.58	35.07	32.57	30.06	27.56	25.05	22.55	20.04	17.54	15.03	12.53	10.02	7.52	5.01	2.51	0.00
0.10	67.64	63.88	60.12	56.36	52.61	48.85	45.09	41.33	37.58	33.82	30.06	26.30	22.55	18.79	15.03	11.27	7.52	3.76	0.00
0.05	135.27	127.76	120.24	112.73	105.21	97.70	90.18	82.67	75.15	67.64	60.12	52.61	45.09	37.58	30.06	22.55	15.03	7.52	0.00

$$d = (V_f - V_s) \times \frac{V_w}{a}$$

d Detection distance (ft.)

V_f Elevator Rated Speed Escalators with rated speeds of 100 ft./min.

V_s Slow Speed[“Sleep mode” Speed] (ft./min.)

V_w Passenger Walking Speed of 4.5 ft./sec.

a Acceleration/Deceleration Rate (ft./sec.²)

Note: 1 ft./min. = 0.0167 ft./sec.

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application for
Permanent Variance by:

Los Angeles World Airports

OSHSB File No.: See section A.1 table of
Proposed Decision Dated: March 24, 2022

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached
PROPOSED DECISION by Autumn Gonzalez, Hearing Officer.

DAVID THOMAS, Chairman

BARBARA BURGEL, Member

KATHLEEN CRAWFORD, Member

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date of Adoption: April 21, 2022

THE FOREGOING VARIANCE DECISION WAS
ADOPTED ON THE DATE INDICATED ABOVE.
IF YOU ARE DISSATISFIED WITH THE
DECISION, A PETITION FOR REHEARING
MAY BE FILED BY ANY PARTY WITH THE
STANDARDS BOARD WITHIN TWENTY (20)
DAYS AFTER SERVICE OF THE DECISION.
YOUR PETITION FOR REHEARING MUST
FULLY COMPLY WITH THE REQUIREMENTS
OF CALIFORNIA CODE OF REGULATIONS,
TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be
posted for the Applicant's employees to
read, and/or a copy thereof must be
provided to the employees' Authorized
Representatives.

BEFORE THE
 OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
 DEPARTMENT OF INDUSTRIAL RELATIONS
 STATE OF CALIFORNIA

<p>In the Matter of Application for Permanent Variance by:</p> <p style="text-align: center;">Los Angeles World Airports</p>	<p>OSHSB File Nos.: See section A.1 table below</p> <p style="text-align: center;"><u>PROPOSED DECISION</u></p> <p>Hearing Date: March 23, 2022</p>
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A. Subject Matter and Jurisdiction:

- Each below listed applicant (“Applicant”) has applied for permanent variance from certain provisions of the Elevator Safety Orders, found at title 8, of the California Code of Regulations¹, with respect to a conveyance, or conveyances, in the listed quantity, at the listed location:

Variance No.	Applicant Name	Variance Location Address	No. of Escalators
21-V-567	Los Angeles World Airports	Terminal 3 300 World Way Los Angeles, CA	2

- This proceeding is conducted in accordance with Labor Code section 143, and title 8, section 401, et. seq.
- The safety orders at issue are section 3141.11, incorporated ASME A17.1-2004, sections 6.1.4.1., and 6.1.6.4, and section 3141.2 incorporated ASME A17.1-2004, sections 8.7.6.1.1 [8.7.1.1] and 8.7.6.1.6.

B. Process and Procedure:

- This hearing was held on March 23, 2022, in Sacramento, California, via teleconference, by Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Autumn Gonzalez, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with section 426.
- At the hearing, Jennifer Linares, with Schindler Elevator Corporation, appeared on behalf of the Applicants; Mark Wickens and David Morris appeared on behalf of the

¹ Unless otherwise noted, all references are to California Code of Regulations, title 8.

Proposed Variance Decision

OSHSB Varinace File No. 21-V-567

Hearing Date: March 23, 2022

Division of Occupational Safety and Health (“Division”), and Michael Nelmda appeared on behalf of Board staff, in a technical advisory role apart from the Board.

3. Oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence:

Exhibit Number	Description of Exhibit
PD-1	Permanent variance applications per section A.1 table
PD-2	OSHSB Notice of Hearing
PD-3	Board Staff Reviews of Variance Application
PD-4	Division Reviews of Variance Application
PD-5	Review Draft-1 Proposed Decision

Official notice is taken of the Board’s rulemaking records, and variance decisions concerning the safety order requirements from which variance is requested. At close of hearing on March 23, 2022, the record was closed, and the matter taken under submission by the Hearing Officer.

C. Findings of Fact

1. Based upon the record of this proceeding, the Board finds the following: Applicant proposes to perform alterations to two(2) existing escalators that include a “sleep mode” capability that will cause the escalator to run at a reduced speed when not in use to conserve energy. This arrangement does not comply with the Elevator Safety Orders that prohibit the intentional variation of an escalator’s speed after start-up, and thus variance is requested from California Code of Regulations, For this reason, the Applicant requires a permanent variance from the provisions of California Code of Regulations, Title 8, Elevator Safety Orders, Group IV, Section 3141.2 [ASME A17.1-2004 Sections 8.7.6.1.1 (8.7.1.1) and 8.7.6.1.6] with the relevant code sections being ASME A17.1-2004, Sections 6.1.4.1 and 6.1.6.4, regarding the variation of escalator speed and handrail speed monitoring.
2. ASME A17.1-2004, section 8.7.8.1.6 states:

8.7.8.1.6 Handrails. Any alteration to the handrails or handrail system shall require conformance with 6.1.3.2.2, 6.1.3.4.1 through 6.1.3.4.4, 6.1.3.4.6, 6.1.6.3.12, and 6.1.6.4.
3. The Applicant’s proposed “sleep mode” function is similar to other installations for which a permanent variance has been granted (OSHSB File No. 13-V-153). In this previous variance decision it was concluded by the Board, that a variance also be granted from section 3141.11 [ASME A17.1-2004, Section 6.1.6.4] regarding handrail speed monitoring. ASME A17.1-2004, section 6.1.4.1, states:

6.1.4.1 Limits of Speed. The rated speed shall be not more than 0.5 m/s (100 ft/min), measured along the centerline of the steps in the direction of travel. The speed attained by an escalator after start-up shall not be intentionally varied.

A purpose of this regulation is to ensure that the speed of the escalator during normal operation is kept constant to prevent passengers from losing their balance.

4. The Applicant contends that equivalent safety is achieved through the use of a controller that is capable of varying the escalator drive motor speed in conjunction with dual redundant sensors strategically placed at each end of the unit to detect passenger traffic. When the sensors indicate a lack of traffic approaching the escalator, for a specified amount of time not less than three times the amount of time to transfer a passenger between landings, the control system will initiate the “sleep mode” function, decelerating the escalator to a “crawling speed”, no less than 0.05 m/s (10 ft./min). If passenger traffic is detected while the escalator is in “Sleep Mode,” a signal will be sent to the controller to “wake up” resulting in the escalator accelerating to normal operating speed within 1.5 seconds at a rate no greater than 1 ft/sec².
5. Per Applicant, the sensors used to detect passenger traffic would provide coverage able to detect passengers at a distance greater than a walking person could travel in 2 seconds, which will ensure the escalator is running at normal speed prior to passenger boarding.
6. Applicant proposes that if passenger traffic is detected approaching the escalator opposite the motion of the escalator steps while in “sleep mode”, an alarm will sound and the escalator will exit “sleep mode” and accelerate until it reaches normal operating speed at a rate no greater than 1 ft/sec². This arrangement is intended to discourage passengers from entering the escalator opposite the motion of the steps while at reduced speed.
7. As proposed, the sensors used to detect passenger traffic are to be installed and arranged in a double redundant, fail-safe fashion with two sensors installed at each end of the escalator providing the same coverage field. This arrangement is intended to allow for passenger traffic detection in the case of any single sensor failure and provide for signal comparison by the controller to detect sensor failure. In the event of a detected failure of any one of the passenger traffic sensors, “sleep mode” would be disabled and the escalator would remain at normal operating speed until all sensors have resumed normal function. In addition, the passenger traffic sensors are to be wired to the escalator controller in a fail-safe manner that prevents “sleep mode” activation if the wiring is cut or disconnected.

Proposed Variance Decision

OSHSB Varinace File No. 21-V-567

Hearing Date: March 23, 2022

8. ASME A17.1-2004, section 8.7.6.1.1 states:

8.7.6.1.1. General Requirements. Any alteration to an escalator shall comply with 6.1.6.1, 6.1.6.1.1, 6.1.6.2.1, 6.1.6.3.1, 6.1.6.3.5, 6.1.6.7, 8.7.1.1, and 8.7.1.2.

9. The Division has applied ASME A17.1-2004 section 8.7.6.1.1 (reference to section 8.7.1.1) to the prohibition of intentionally varying the travel speed under section 6.1.4.1.

10. The Division notes in its Review of Application (Exhibit PD-4) that the Applicant proposed “sleep mode” function meets the requirements of ASME A17.1-2010, section 6.1.4.1.2 regarding the varying the speed of an escalator after start-up. For this reason among others identified within the its Review of Application, the Division advises that equivalent or superior safety will be provided by grant of permanent variance in this matter, as conditionally limited per the below Decision and Order.

11. ASME A17.1-2010, section 6.1.4.1.2, states:

Variation of the escalator speed after start-up shall be permitted provided the escalator installation conforms to all of the following:

(a) The acceleration and deceleration rates shall not exceed 0.3 m/s² (1.0 ft/sec²).

(b) The rated speed is not exceeded.

(c) The minimum speed shall be not less than 0.05 m/s (10 ft/min).

(d) The speed shall not automatically vary during inspection operation.

(e) Passenger detection means shall be provided at both landings of the escalator such that

(1) detection of any approaching passenger shall cause the escalator to accelerate to or maintain the full escalator speed conforming to 6.1.4.1.2(a) through (d)

(2) detection of any approaching passenger shall occur sufficiently in advance of boarding to cause the escalator to attain full operating speed before a

passenger walking at normal speed [1.35 m/s (270 ft/min)] reaches the combplate

(3) passenger detection means shall remain active at the egress landing to detect any passenger approaching against the direction of escalator travel and shall cause the escalator to accelerate to full rated speed and sound the alarm (see 6.1.6.3.1) at the approaching landing before the passenger reaches the combplate

(f) Automatic deceleration shall not occur before a period of time has elapsed since the last passenger detection that is greater than 3 times the amount of time necessary to transfer a passenger between landings.

(g) Means shall be provided to detect failure of the passenger detection means and shall cause the escalator to operate at full rated speed only.”

12. The Division states correctly in its Review of Application, that Applicant’s proposed “sleep mode” function is materially similar to other installations for which a permanent variance has been granted (OSHSB File No. 14-V-129). In these previous variance decisions it was concluded that a variance was required from ASME A17.1-2004, section 6.1.6.4 regarding handrail speed monitoring, and the concluding conditional grant of variance provided for the disabling of the handrail-speed monitoring device while the escalator is operating in slow speed “sleep mode.”

13. ASME A17.1-2004, section 6.1.6.4, states:

Handrail Speed Monitoring Device. A handrail speed monitoring device shall be provided that will cause the activation of the alarm required by 6.1.6.3.1(b) without any intentional delay, whenever the speed of either handrail deviates from the step speed by 15% or more. The device shall also cause electric power to be removed from the driving-machine motor and brake when the speed deviation of 15% or more is continuous within a 2 s to 6 s range. The device shall be of the manual-reset type.

The intent of this regulation is to prevent the destabilization of passengers by maintaining the potential relationship of the moving elements with which passengers interaction while riding.

Proposed Variance Decision

OSHSB Varinace File No. 21-V-567

Hearing Date: March 23, 2022

14. The Applicant intends to disable the handrail speed monitoring during sleep mode operation.
15. The Division advises that the proposed “sleep mode” system incorporating the proposed hand rail speed control specifications, subject to all conditions and limitations of the below Decision and Order will provide for safety equivalence.
16. The proposed “sleep mode” system functions and devices are materially comparable to other installations for which permanent variance previously has been granted by the Board (e.g. OSHSB File No. 13-V-153, 14-V-129, 15-V-236, 16-V-069), absent, to the Division’s reported knowledge, adverse effect upon passenger or workplace safety or health.
17. Both Division and Board staff recommend that conditionally limited grant of permanent variance in this matter, per the below Decision and Order, will provide for passenger safety and occupational safety and health equivalent or superior to that would otherwise prevail per the subject Elevator Safety Order requirements.

D. Conclusive Findings:

The above stated procedural prerequisites, legal authority, and factual findings, as further supported by the documentary record and hearing testimony in this matter, provide a substantive and reasonable basis of conclusion that: (1) Applicant has complied with the statutory and regulatory requirements that must be met before an application for permanent variance may be conditionally granted, and (2) a preponderance of the evidence establishes that Applicant’s proposal, subject to all conditions and limitations set forth in the below Decision and Order, will provide equivalent safety and health to that which would prevail upon full compliance with the requirements of the Elevator Safety Orders from which variance is being sought.

E. Decision and Order:

The Application of each above section A table identified Applicant, is conditionally GRANTED as specified below, and to the limited extent, as of the date the Board adopts this Proposed Decision, the respective section A table specified quantity of “sleep mode” escalators units per Appendix A, at the specified location shall have permanent variance from Applicant requires a permanent variance from the provisions of section 3141.2 [ASME A17.1-2004 Sections 8.7.6.1.1 (8.7.1.1) and 8.7.6.1.6] with the relevant code sections being ASME A17.1-2004, Sections 6.1.4.1 and 6.1.6.4, regarding the variation of escalator speed and handrail speed monitoring, subject to each and all of the following requirements and limitations:

Proposed Variance Decision

OSHSB Varinace File No. 21-V-567

Hearing Date: March 23, 2022

1. The Applicant may intentionally vary the escalator speed and install proximity sensors for traffic detection subject to the following:

- (a) The rate of acceleration and deceleration shall not exceed 0.3 m/s^2 (1 ft/sec^2) when transitioning between speeds.
- (b) Failure of a single proximity sensor including its associated circuitry, shall cause the escalator to revert to its normal operating speed at an acceleration of not more than 0.3 m/s^2 (1 ft/sec^2).
- (c) Automatic deceleration shall not occur before a period of time of not less than three times the time it takes a passenger to ride from one landing to the other at normal speed has elapsed.
- (d) Detection of any passenger shall cause the escalator to reach full speed before a passenger, walking at 4.5 ft/sec , reaches the comb plate.
- (e) The passenger detection means shall detect a person within a sufficient distance along all possible paths to the escalator that do not require climbing over barriers or escalator handrails to assure that the escalator attains full operating speed before a person walking at 4.5 ft/sec reaches the escalator comb plate. The minimum detection distance shall be calculated according to the following formula or alternatively according to Exhibit 1 (Detection Distance Sleep Mode Operation) attached hereto and incorporated herein by this reference:

$$d = (V_f - V_s) \times (V_w / a) \text{ where}$$

$d = \text{detection distance (ft)}$

$V_f = \text{normal speed (ft/min) [not to exceed 100 ft/min]}$

$V_s = \text{slow "sleep" speed (ft/min) [not less than 10 ft/min]}$

$V_w = \text{passenger walking speed (4.5 ft/sec)}$

$a = \text{acceleration/deceleration rate (ft/sec}^2\text{)[not to exceed 1 ft/sec}^2\text{]}$

- (f) Detection of any passenger approaching against the direction of escalator travel shall cause the escalator to reach full speed before a passenger, walking at 4.5 ft/sec , reaches the comb plate and shall cause the escalator alarm to sound. The sounding of the alarm may include a 3 to 5 second alarm or three 1 second alarm soundings.

Proposed Variance Decision

OSHSB Varinace File No. 21-V-567

Hearing Date: March 23, 2022

- (g) The minimum speed of the escalator shall not be less than 0.05 m/s (10 ft/min). The "sleep mode" functionality shall not affect the escalator inspection operation. The speed of the escalator shall not vary during Inspection Mode.
 - (h) There shall be two means of detecting passengers at each end of the escalator for redundancy and for detection of failure in the passenger detection means.
 - (i) The passenger sensors (detectors) at each end of the escalator must be verified by the control system for proper operation in the following manner:
 - 1. If any of the passenger detection sensors remains tripped for at least 5 minutes but no more than 10 minutes, then the control system shall generate a fault to indicate which sensor is faulted while causing the escalator to exit the Sleep Mode and remain at the normal run speed until the faulted sensor begins to function properly.
 - 2. If one of the paired sensors at either end of the escalator does not trip while the other paired sensor trips at least five times but no more than ten times, the control system shall generate a fault to indicate which sensor is faulted while causing the escalator to exit the Sleep Mode and remain at the normal run speed until the faulted sensor begins to function properly.
 - (j) The handrail speed monitoring device required by section 6.1.6.4 may be disabled while the escalator is operating in the slow speed (Sleep Mode) condition.
- 2. The Applicant shall have the controller schematic diagrams available in the control space together with a written explanation of the operation of the controller.
 - 3. An annual test shall be conducted by a Certified Competent Conveyance Mechanic (CCCM) employed by a Certified Qualified Conveyance Company (CQCC) which maintains and services the escalators, to demonstrate that the escalator is transitioning between "Normal Mode" and "Sleep Mode" and back in conformance with the terms of this variance. The instrumentation used shall be capable of allowing the CCCM to determine the acceleration and deceleration rates of the escalator.
 - 4. The results of each annual test required by Condition No. 3 shall be submitted to the appropriate Elevator Unit District Office in tabular and graphic form (speed vs. time).

Proposed Variance Decision

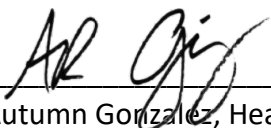
OSHSB Varinace File No. 21-V-567

Hearing Date: March 23, 2022

5. Whenever practicable, as determined by the Applicant and subject to the concurrence of the Division, the variable speed system is to be installed without the installation of new bollards or other such new structures, if the bollards or other structures would impede passenger movement at the destination end of the escalator. If new bollards or other such structures of that sort are constructed in connection with the variable speed system, the Applicant will take all practicable steps to minimize the impact of same on the movement of passengers at the destination end of the escalator.
6. Any Certified Qualified Conveyance Company (CQCC; elevator contractor) performing inspection, maintenance, servicing or testing of the escalators shall be provided a copy of the variance decision.
7. The Division shall be notified when the escalator is ready for inspection, and the escalator shall be inspected by the Division and a "Permit to Operate" issued before the escalator may be placed in service.
8. The Applicant shall notify its employees or their authorized representative(s), or both, of this order in the same way and to the same extent that employees and authorized representatives are to be notified of docketed permanent variance applications pursuant to sections 411.2 and 411.3.
9. This Decision and Order shall remain in effect unless modified or revoked upon application by the Applicant, affected employee(s), the Division, or by the Board on its own motion, in procedural accordance with section 411, et. seq.

Pursuant to section 426 subdivision (b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

DATED: March 24, 2022



Autumn Gonzalez, Hearing Officer

Proposed Variance Decision
OSHSB Varinace File No. 21-V-567
Hearing Date: March 23, 2022

APPENDIX A

Permanent Variance is granted as to the below specified escalators, identified by the Applicant assigned designations in effect on the date of Decision and Order adoption:

Variance No.	Escalator ID
21-V-567	P2879
21-V-567	P2880

Exhibit 1
 Detection Distance Sleep Mode Operation
 Acceleration Rate (ft./sec²) vs. Escalator Sleep Mode Speed (ft./min)

	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
1.00	6.76	6.39	6.01	5.64	5.26	4.88	4.51	4.13	3.76	3.38	3.01	2.63	2.25	1.88	1.50	1.13	0.75	0.38	0.00
0.95	7.12	6.72	6.33	5.93	5.54	5.14	4.75	4.35	3.96	3.56	3.16	2.77	2.37	1.98	1.58	1.19	0.79	0.40	0.00
0.90	7.52	7.10	6.68	6.26	5.85	5.43	5.01	4.59	4.18	3.76	3.34	2.92	2.51	2.09	1.67	1.25	0.84	0.42	0.00
0.85	7.96	7.52	7.07	6.63	6.19	5.75	5.30	4.86	4.42	3.98	3.54	3.09	2.65	2.21	1.77	1.33	0.88	0.44	0.00
0.80	8.45	7.98	7.52	7.05	6.58	6.11	5.64	5.17	4.70	4.23	3.76	3.29	2.82	2.35	1.88	1.41	0.94	0.47	0.00
0.75	9.02	8.52	8.02	7.52	7.01	6.51	6.01	5.51	5.01	4.51	4.01	3.51	3.01	2.51	2.00	1.50	1.00	0.50	0.00
0.70	9.66	9.13	8.59	8.05	7.52	6.98	6.44	5.90	5.37	4.83	4.29	3.76	3.22	2.68	2.15	1.61	1.07	0.54	0.00
0.65	10.41	9.83	9.25	8.67	8.09	7.52	6.94	6.36	5.78	5.20	4.62	4.05	3.47	2.89	2.31	1.73	1.16	0.58	0.00
0.60	11.27	10.65	10.02	9.39	8.77	8.14	7.52	6.89	6.26	5.64	5.01	4.38	3.76	3.13	2.51	1.88	1.25	0.63	0.00
0.55	12.30	11.61	10.93	10.25	9.56	8.88	8.20	7.52	6.83	6.15	5.47	4.78	4.10	3.42	2.73	2.05	1.37	0.68	0.00
0.50	13.53	12.78	12.02	11.27	10.52	9.77	9.02	8.27	7.52	6.76	6.01	5.26	4.51	3.76	3.01	2.25	1.50	0.75	0.00
0.45	15.03	14.20	13.36	12.53	11.69	10.86	10.02	9.19	8.35	7.52	6.68	5.85	5.01	4.18	3.34	2.51	1.67	0.84	0.00
0.40	16.91	15.97	15.03	14.09	13.15	12.21	11.27	10.33	9.39	8.45	7.52	6.58	5.64	4.70	3.76	2.82	1.88	0.94	0.00
0.35	19.32	18.25	17.18	16.10	15.03	13.96	12.88	11.81	10.74	9.66	8.59	7.52	6.44	5.37	4.29	3.22	2.15	1.07	0.00
0.30	22.55	21.29	20.04	18.79	17.54	16.28	15.03	13.78	12.53	11.27	10.02	8.77	7.52	6.26	5.01	3.76	2.51	1.25	0.00
0.25	27.05	25.55	24.05	22.55	21.04	19.54	18.04	16.53	15.03	13.53	12.02	10.52	9.02	7.52	6.01	4.51	3.01	1.50	0.00
0.20	33.82	31.94	30.06	28.18	26.30	24.42	22.55	20.67	18.79	16.91	15.03	13.15	11.27	9.39	7.52	5.64	3.76	1.88	0.00
0.15	45.09	42.59	40.08	37.58	35.07	32.57	30.06	27.56	25.05	22.55	20.04	17.54	15.03	12.53	10.02	7.52	5.01	2.51	0.00
0.10	67.64	63.88	60.12	56.36	52.61	48.85	45.09	41.33	37.58	33.82	30.06	26.30	22.55	18.79	15.03	11.27	7.52	3.76	0.00
0.05	135.27	127.76	120.24	112.73	105.21	97.70	90.18	82.67	75.15	67.64	60.12	52.61	45.09	37.58	30.06	22.55	15.03	7.52	0.00

$$d = (V_f - V_s) \times \frac{V_w}{a}$$

d Detection distance (ft.)

V_f Elevator Rated Speed Escalators with rated speeds of 100 ft./min.

V_s Slow Speed[“Sleep mode” Speed] (ft./min.)

V_w Passenger Walking Speed of 4.5 ft./sec.

a Acceleration/Deceleration Rate (ft./sec.²)

Note: 1 ft./min. = 0.0167 ft./sec.

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application for
Permanent Variance by:

Los Angeles World Airports

OSHSB File No.: See section A.1 table of
Proposed Decision Dated: March 24, 2022

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached
PROPOSED DECISION by Autumn Gonzalez, Hearing Officer.

DAVID THOMAS, Chairman

BARBARA BURGEL, Member

KATHLEEN CRAWFORD, Member

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date of Adoption: April 21, 2022

THE FOREGOING VARIANCE DECISION WAS
ADOPTED ON THE DATE INDICATED ABOVE.
IF YOU ARE DISSATISFIED WITH THE
DECISION, A PETITION FOR REHEARING
MAY BE FILED BY ANY PARTY WITH THE
STANDARDS BOARD WITHIN TWENTY (20)
DAYS AFTER SERVICE OF THE DECISION.
YOUR PETITION FOR REHEARING MUST
FULLY COMPLY WITH THE REQUIREMENTS
OF CALIFORNIA CODE OF REGULATIONS,
TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be
posted for the Applicant's employees to
read, and/or a copy thereof must be
provided to the employees' Authorized
Representatives.

BEFORE THE
 OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
 DEPARTMENT OF INDUSTRIAL RELATIONS
 STATE OF CALIFORNIA

<p>In the Matter of Application for Permanent Variance regarding:</p> <p style="text-align: center;">Los Angeles World Airports</p>	<p>OSHSB File Nos.: See Section A.1 table below</p> <p style="text-align: center;"><u>PROPOSED DECISION</u></p> <p>Hearing Date: March 23, 2022</p>
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A. Subject Matter and Jurisdiction:

1. Los Angeles World Airports (“Applicant”) has applied for permanent variance from certain provisions of the Elevator Safety Orders, found at title 8, of the California Code of Regulations, with respect to a conveyance, or conveyances, in the listed quantity, at the listed location:

Variance No.	Variance Location Address	No. of Moving Walkways
21-V-568	Terminal 3 300 World Way Los Angeles, CA	4

2. This proceeding is conducted in accordance with Labor Code section 143, and California Code of Regulations, title 8, section 401, et. seq.
3. The safety orders at issue are California Code of Regulations, title 8, section 3141.12, incorporated ASME A17.1-2004, sections 6.2.4.1 and 6.2.6.4.

B. Process and Procedure:

1. This hearing was held on March 23, 2022, in Sacramento, California, via teleconference, by Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Autumn Gonzalez, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with California Code of Regulations, title 8, section 426.
2. At the hearing, Jennifer Linares, with Schindler Elevator Corporation, appeared on behalf of Los Angeles World Airports; Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”), and Michael Nelmidia appeared on behalf of Board staff, in a technical advisory role apart from the Board.

3. Documentary and oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence:

Exhibit Number	Description of Exhibit
PD-1	Application(s) for Permanent Variance per section A.1 table
PD-2	OSHSB Notice of Hearing
PD-3	Division Review of Variance Application
PD-4	Board Staff Review of Variance Application
PD-5	Review Draft-1 Proposed Decision

Official notice is taken of the Board’s files, records, recordings and decisions concerning the Elevator Safety Order requirements from which variance shall issue. On March 23, 2022, the hearing and record closed, and the matter was taken under submission by the Hearing Officer.

C. Findings of Fact—Based upon the record of this proceeding, the Board finds the following:

1. Applicant seeks variance from certain Code of Regulations, title 8, Elevator Safety Orders, toward the stated purpose of installing new moving walks that include a “Sleep Mode” capability that will cause the moving walk to run at a reduced speed when not in use, thus resulting in conservation of electrical energy.
2. Each subject moving walkway are to be situated at the variance location per Section A.1 table, and more specifically per below Appendix A.
3. The Applicant’s proposed Sleep Mode feature is not compliant with existing California Code of Regulation title 8, Elevator Safety Orders, which prohibits the intentional variation of a moving walk’s speed after start-up.
4. In order to install moving walks that include a Sleep Mode capability, Applicant requires a permanent variance from the provisions of California Code of Regulations, title 8, Elevator Safety Orders, Group IV, section 3141.12 [ASME A17.1-2004, sections 6.2.4] regarding the variation of moving walk speed.
5. Concerning variance in moving walk speed, Code of Regulations, title 8, section 3141.12 [ASME A17.1-2004, section 6.2.4] states:

The maximum speed of a treadway shall depend on the maximum slope at any point on the treadway. The speed shall not exceed the value determined by Table 6.2.4.

The speed attained by a moving walk after startup shall not be intentionally varied.

Table 6.2.4	Treadway Speed
Maximum Treadway Slope at Any Point on Treadway, deg	Maximum Treadway Speed,m/s (ft/min)
0 to 8	0.9 (180)
Above 8 to 12	0.7 (140)

6. As quoted above, the intent of section 3141.12 is to ensure that the speed of the moving walk during normal operation is kept constant to prevent passengers from losing their balance.
7. The Applicant contends that equivalent safety is achieved through the use of a controller that is capable of varying the moving walk drive motor speed in conjunction with dual redundant sensors strategically placed at each end of the unit to detect passenger traffic. When the sensors indicate a lack of traffic approaching the moving walk for 10 minutes, the control system will initiate the “sleep mode” function, decelerating the moving walk to approximately 20 feet per minute. If passenger traffic is detected while the moving walk is in “sleep mode”, a signal will be sent to the controller to “wake up”, resulting in the moving walk accelerating to normal operating speed within 1.5 seconds at a rate no greater than one ft/sec².
8. The Applicant states that if passenger traffic is detected approaching the moving walk opposite the motion of the moving walk while in “sleep mode”, an alarm will sound and the moving walk will exit “sleep mode” and accelerate until it reaches normal operating speed at a rate no greater than one ft/sec². This arrangement is to discourage passengers from entering the moving walk opposite the motion of the treadway while at reduced speed. The Applicant proposes sensors used to detect passenger traffic being installed and arranged in a double redundant, fail-safe fashion with two sensors installed at each end of the moving walk providing the same coverage field.
9. The Applicant states that the sensors used to detect passenger traffic are installed and arranged in a double redundant, fail-safe fashion with two sensors installed at each end of the moving walk, providing the same coverage field. This arrangement allows for passenger traffic detection in the case of any single sensor failure and provides for signal comparison by the controller to detect sensor failure. In the event of a detected failure of any one of the passenger traffic sensors, “sleep mode” would be disabled and the moving walk would remain at normal operating speed until all sensors have resumed normal function. The passenger traffic sensors are wired to the moving walk controller in a fail-safe manner that prevents “sleep mode” activation if the wiring is cut or disconnected. Applicant proposes a design in which detected failure of any one of the passenger traffic sensors, result in a disabling of “sleep mode” such that the

moving walk would remain at normal operating speed until all sensors have resumed normal function. In addition the proposed design would have passenger traffic sensors wired to the moving walk controller in a fail-safe manner that prevents “sleep mode” activation if the sensor wiring is cut or disconnected.

10. The Division, in its evaluation (Exhibit PD-3), is of the well informed opinion that the Applicant proposed Sleep Mode function meets the requirements of ASME A17.1-2010, section 6.2.4.1.2 regarding the varying the speed of an moving walk after start-up.
11. ASME A17.1-2010, section 6.2.4.1.2 states:

“Variation of the moving-walk speed after start-up shall be permitted provided the moving-walk installation conforms to all of the following:

- (a) The acceleration and deceleration rates shall not exceed 0.3 m/s^2 (1.0 ft/sec^2).
- (b) The rated speed is not exceeded.
- (c) The minimum speed shall be not less than 0.05 m/s (10 ft/min).
- (d) The speed shall not automatically vary during inspection operation.
- (e) Passenger detection means shall be provided at both landings of the moving walk such that
 - (1) detection of any approaching passenger shall cause the moving walk to accelerate to or maintain the full moving walk speed conforming to 6.2.4.1.2(a) through (d)
 - (2) detection of any approaching passenger shall occur sufficiently in advance of boarding to cause the moving walk to attain full operating speed before a passenger walking at normal speed [1.35 m/s (270 ft/min)] reaches the combplate
 - (3) passenger detection means shall remain active at the egress landing to detect any passenger approaching against the direction of moving walk travel and shall cause the moving walk to accelerate to full rated speed and sound the alarm (see 6.2.6.3.2) at the approaching landing before the passenger reaches the combplate

- (f) Automatic deceleration shall not occur before a period of time has elapsed since the last passenger detection that is greater than 3 times the amount of time necessary to transfer a passenger between landings.
- (g) Means shall be provided to detect failure of the passenger detection means and shall cause the moving walk to operate at full rated speed only.”

12. The Applicant’s proposed Sleep Mode function is similar to other installations for which a permanent variance has been granted (OSHSB File No. 14-V-129, 16-V-069 and 20-V-323). In these previous variance decisions it was concluded that a variance was required from ASME A17.1-2004, section 6.2.6.4 regarding handrail speed monitoring. Conditions set forth in the previous variance decisions allow for the disabling of the handrail speed monitoring device while the conveyance is operating in slow speed Sleep Mode.

13. Concerning handrail speed monitoring, section 3141.12 [ASME A17.1-2004, section 6.2.6.4] states:

“Handrail Speed Monitoring Device. A handrail speed monitoring device shall be provided that will cause the activation of the alarm required by 6.2.6.3.1(b) without any intentional delay, whenever the speed of either handrail deviates from the treadway speed by 15% or more. The device shall also cause electric power to be removed from the driving-machine motor and brake when the speed deviation of 15% or more is continuous within a 2 s to 6 s range. The device shall be of the manual-reset type.”

14. The Division, in its Review of Application (Exhibit PD-3), and Board staff, in its Application Review Memorandum (Exhibit PD-4), each conclude that the moving walk Sleep Mode function design, as proposed by the Applicant, subject to certain conditions and limitations, will provide equivalent occupational safety and health to the Code of Regulations, title 8, Elevator Safety Orders requirements from which variance is being sought, and conveyance passenger safety, and recommend that the applied for variance be granted subject to specified conditions and limitations in material conformity with those incorporated into the Decision and Order below.

D. Conclusive Findings:

The above stated procedural prerequisites, legal authority, and factual findings, as further supported by the documentary record and hearing testimony in this matter, provide a substantive and reasonable basis of conclusion that: (1) Each Applicant has complied with

the statutory and regulatory requirements that must be met before an application for permanent variance may be conditionally granted, and (2) a preponderance of the evidence establishes that each Applicant's proposal, subject to all conditions and limitations set forth in the below Decision and Order, will provide equivalent safety and health to that which would prevail upon full compliance with the requirements of California Code of Regulation, title 8, Elevator Safety Orders from which variance is being sought.

E. Decision and Order:

The Application of each above section A table identified Applicant, is conditionally GRANTED as specified below, and to the limited extent, as of the date the Board adopts this Proposed Decision, the respective section A.1 table specified quantity of "sleep mode" moving walkway units per Appendix A, at the specified location shall have permanent variance from the following subparts of ASME A17.1-2004 sections 6.2.4, and 6.2.6.4, subject to each and all of the following requirements and limitations:

1. The Applicant may intentionally vary the moving walk speed and install proximity sensors for traffic detection subject to the following:
 - (a) The rate of acceleration and deceleration shall not exceed 0.3 m/s^2 (1 ft/sec^2) when transitioning between speeds.
 - (b) Failure of a single proximity sensor including its associated circuitry, shall cause the moving walk to revert to its normal operating speed at an acceleration of not more than 0.3 m/s^2 (1 ft/sec^2).
 - (c) Automatic deceleration shall not occur before a period of time of not less than three times the time it takes a passenger to ride from one landing to the other at normal speed has elapsed.
 - (d) Detection of any passenger shall cause the moving walk to reach full speed before a passenger, walking at 4.5ft/sec, reaches the comb plate.
 - (e) The passenger detection means shall detect a person within a sufficient distance along all possible paths to the moving walk that do not require climbing over barriers or moving walk handrails to assure that the moving walk attains full operating speed before a person walking at 4.5 ft/sec reaches the moving walk comb plate. The minimum detection distance shall be calculated according to the following formula or alternatively according to Appendix 1 (Detection Distance Sleep Mode Operation) attached hereto and incorporated herein by this reference:

$$d = (V_f - V_s) \times (V_w / a) \text{ where}$$

d = detection distance (ft)

V_f = normal speed (ft/min) [not to exceed 100 ft/min]

V_s = slow "sleep" speed (ft/min) [not less than 10 ft/min]

V_w = passenger walking speed (4.5 ft/sec)

a = acceleration/deceleration rate (ft/sec²)[not to exceed 1 ft/sec²]

- (f) Detection of any passenger approaching against the direction of moving walk travel shall cause the moving walk to reach full speed before a passenger, walking at 4.5 ft/sec, reaches the comb plate and shall cause the moving walk alarm to sound. The sounding of the alarm may include a 3 to 5 second alarm or three 1 second alarm soundings.
 - (g) The minimum speed of the moving walk shall not be less than 0.05 m/s (10 ft/min). The "Sleep Mode" functionality shall not affect the moving walk inspection operation. The speed of the moving walk shall not vary during Inspection Mode.
 - (h) There shall be two means of detecting passengers at each end of the moving walk for redundancy and for detection of failure in the passenger detection means.
 - (i) The passenger sensors (detectors) at each end of the moving walk must be verified by the control system for proper operation in the following manner:
 - 1. If any of the passenger detection sensors remains tripped for at least 5 minutes but no more than 10 minutes, then the control system shall generate a fault to indicate which sensor is faulted while causing the moving walk to exit the Sleep Mode and remain at the normal run speed until the faulted sensor begins to function properly.
 - 2. If one of the paired sensors at either end of the moving walk does not trip while the other paired sensor trips at least five times but no more than ten times, the control system shall generate a fault to indicate which sensor is faulted while causing the moving walk to exit the Sleep Mode and remain at the normal run speed until the faulted sensor begins to function properly.
 - (j) The handrail speed monitoring device required by section 6.2.6.4 may be disabled while the moving walk is operating in the slow speed (Sleep Mode) condition.
- 2. The Applicant shall have the controller schematic diagrams available in the control space together with a written explanation of the operation of the controller.
 - 3. An annual test shall be conducted by a Certified Competent Conveyance Mechanic (CCCM) employed by a Certified Qualified Conveyance Company (CQCC) which maintains and services the moving walks, to demonstrate that the moving walk is transitioning between "Normal Mode" and "Sleep Mode" and back in conformance with the terms of this variance.

*Proposed Variance Decision
Los Angeles World Airports
Hearing Date: March 23, 2022*

The instrumentation used shall be capable of allowing the CCCM to determine the acceleration and deceleration rates of the moving walk.

4. The results of each annual test required by Condition No. 3 shall be submitted to the appropriate Elevator Unit District Office in tabular and graphic form (speed vs. time).
5. Whenever practicable, as determined by the Applicant and subject to the concurrence of the Division, the variable speed system is to be installed without the installation of new bollards or other such new structures, if the bollards or other structures would impede passenger movement at the destination end of the moving walk. If new bollards or other such structures of that sort are constructed in connection with the variable speed system, the Applicant will take all practicable steps to minimize the impact of same on the movement of passengers at the destination end of the moving walk.
6. Any Certified Qualified Conveyance Company (CQCC; elevator contractor) performing inspection, maintenance, servicing or testing of the moving walk shall be provided a copy of the variance decision.
7. The Division shall be notified when each subject conveyance is ready for inspection to determine compliance with the permanent variance pursuant to this Decision and Order. Each subject conveyance shall have been inspected by the Division to determine compliance with this Decision and Order, and a Permit to Operate shall have been issued and in effect, before the conveyance is placed in service.
8. The Applicant shall notify its employees or their authorized representative(s), or both, of this order in the same way that the Applicant was required to notify them of the docketed application for permanent variance per California Code of Regulations, title 8, sections 411.2 and 411.3.
9. This Decision and Order shall remain in effect unless modified or revoked upon application by the Applicant, affected employee(s), the Division of Occupational Safety and Health, or by the Board on its own motion, in the procedural manner prescribed per title 8, Chapter 3.5, Subchapter 1.

Pursuant to California Code of Regulations, title 8, section 426(b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

DATED: March 24, 2022



Autumn Gonzalez, Hearing Officer

APPENDIX A

Permanent Variance is granted as to the below specified moving walkways, identified by the Applicant assigned designations in effect on the date of Decision and Order adoption:

Variance No.	Moving Walkway ID
21-V-568	Unit 1 – P5775
21-V-568	Unit 2 – P5776
21-V-568	Unit 3 –P5777
21-V-568	Unit 4 – P5778

Exhibit 1
 Detection Distance Sleep Mode Operation
 Acceleration Rate (ft./sec²) vs. Walkway Sleep Mode Speed (ft./min)

	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
1.00	6.76	6.39	6.01	5.64	5.26	4.88	4.51	4.13	3.76	3.38	3.01	2.63	2.25	1.88	1.50	1.13	0.75	0.38	0.00
0.95	7.12	6.72	6.33	5.93	5.54	5.14	4.75	4.35	3.96	3.56	3.16	2.77	2.37	1.98	1.58	1.19	0.79	0.40	0.00
0.90	7.52	7.10	6.68	6.26	5.85	5.43	5.01	4.59	4.18	3.76	3.34	2.92	2.51	2.09	1.67	1.25	0.84	0.42	0.00
0.85	7.96	7.52	7.07	6.63	6.19	5.75	5.30	4.86	4.42	3.98	3.54	3.09	2.65	2.21	1.77	1.33	0.88	0.44	0.00
0.80	8.45	7.98	7.52	7.05	6.58	6.11	5.64	5.17	4.70	4.23	3.76	3.29	2.82	2.35	1.88	1.41	0.94	0.47	0.00
0.75	9.02	8.52	8.02	7.52	7.01	6.51	6.01	5.51	5.01	4.51	4.01	3.51	3.01	2.51	2.00	1.50	1.00	0.50	0.00
0.70	9.66	9.13	8.59	8.05	7.52	6.98	6.44	5.90	5.37	4.83	4.29	3.76	3.22	2.68	2.15	1.61	1.07	0.54	0.00
0.65	10.41	9.83	9.25	8.67	8.09	7.52	6.94	6.36	5.78	5.20	4.62	4.05	3.47	2.89	2.31	1.73	1.16	0.58	0.00
0.60	11.27	10.65	10.02	9.39	8.77	8.14	7.52	6.89	6.26	5.64	5.01	4.38	3.76	3.13	2.51	1.88	1.25	0.63	0.00
0.55	12.30	11.61	10.93	10.25	9.56	8.88	8.20	7.52	6.83	6.15	5.47	4.78	4.10	3.42	2.73	2.05	1.37	0.68	0.00
0.50	13.53	12.78	12.02	11.27	10.52	9.77	9.02	8.27	7.52	6.76	6.01	5.26	4.51	3.76	3.01	2.25	1.50	0.75	0.00
0.45	15.03	14.20	13.36	12.53	11.69	10.86	10.02	9.19	8.35	7.52	6.68	5.85	5.01	4.18	3.34	2.51	1.67	0.84	0.00
0.40	16.91	15.97	15.03	14.09	13.15	12.21	11.27	10.33	9.39	8.45	7.52	6.58	5.64	4.70	3.76	2.82	1.88	0.94	0.00
0.35	19.32	18.25	17.18	16.10	15.03	13.96	12.88	11.81	10.74	9.66	8.59	7.52	6.44	5.37	4.29	3.22	2.15	1.07	0.00
0.30	22.55	21.29	20.04	18.79	17.54	16.28	15.03	13.78	12.53	11.27	10.02	8.77	7.52	6.26	5.01	3.76	2.51	1.25	0.00
0.25	27.05	25.55	24.05	22.55	21.04	19.54	18.04	16.53	15.03	13.53	12.02	10.52	9.02	7.52	6.01	4.51	3.01	1.50	0.00
0.20	33.82	31.94	30.06	28.18	26.30	24.42	22.55	20.67	18.79	16.91	15.03	13.15	11.27	9.39	7.52	5.64	3.76	1.88	0.00
0.15	45.09	42.59	40.08	37.58	35.07	32.57	30.06	27.56	25.05	22.55	20.04	17.54	15.03	12.53	10.02	7.52	5.01	2.51	0.00
0.10	67.64	63.88	60.12	56.36	52.61	48.85	45.09	41.33	37.58	33.82	30.06	26.30	22.55	18.79	15.03	11.27	7.52	3.76	0.00
0.05	135.27	127.76	120.24	112.73	105.21	97.70	90.18	82.67	75.15	67.64	60.12	52.61	45.09	37.58	30.06	22.55	15.03	7.52	0.00

$$d = (V_f - V_s) \times \frac{V_w}{a}$$

d Detection distance (ft.)

V_f Walkway Rated Speed (Walkways with rated speeds of 100 ft./min.)

V_s Slow Speed[“Sleep mode” Speed] (ft./min.)

V_w Passenger Walking Speed of 4.5 ft./sec.

a Acceleration/Deceleration Rate (ft./sec.²)

Note: 1 ft./min. = 0.0167 ft./sec.

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application for
Permanent Variance regarding:

KONE Monospace 300 Elevators (Group IV)

OSHSB File No.: see Section A.1 table of
Proposed Decision Dated: March 24, 2022

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached
PROPOSED DECISION by Autumn Gonzalez, Hearing Officer.

DAVID THOMAS, Chairman

BARBARA BURGEL, Member

KATHLEEN CRAWFORD, Member

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date of Adoption: April 21, 2022

THE FOREGOING VARIANCE DECISION WAS
ADOPTED ON THE DATE INDICATED ABOVE.
IF YOU ARE DISSATISFIED WITH THE
DECISION, A PETITION FOR REHEARING
MAY BE FILED BY ANY PARTY WITH THE
STANDARDS BOARD WITHIN TWENTY (20)
DAYS AFTER SERVICE OF THE DECISION.
YOUR PETITION FOR REHEARING MUST
FULLY COMPLY WITH THE REQUIREMENTS
OF CALIFORNIA CODE OF REGULATIONS,
TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be
posted for the Applicant's employees to
read, and/or a copy thereof must be
provided to the employees' Authorized
Representatives.

BEFORE THE
 OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
 DEPARTMENT OF INDUSTRIAL RELATIONS
 STATE OF CALIFORNIA

<p>In the Matter of Application for Permanent Variance Regarding:</p> <p style="text-align: center;">KONE Monospace 300 Elevators (Group IV)</p>	<p>OSHSB File Nos.: See Section A.1 Table Below</p> <p style="text-align: center;"><u>PROPOSED DECISION</u></p> <p>Hearing Date: March 23, 2022</p>
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A. Subject Matter:

- Each below listed applicant (“Applicant”) applied for a permanent variance from provisions of the Elevator Safety Orders, found at Title 8 of the California Code of Regulations, with respect to a conveyance, or conveyances, in the listed quantity, at the listed location:

Variance No.	Applicant Name	Variance Location Address	No. of Elevators
21-V-601	Stockton Lodging Inc	3651 Arch Road Stockton, CA	2

- The subject Title 8, safety order requirements are set out within California Code of Regulations, Title 8, Section 3141 incorporated ASME A17.1-2004, Sections 2.18.5.1 and 2.20.4.

B. Procedural:

- This hearing was held on March 23, 2022, in Sacramento, California, via teleconference, by delegation of the Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Autumn Gonzalez, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with California Code of Regulations, Title 8, Section 426.
- At the hearing, Manish Sablok, with KONE, Inc., appeared on behalf of each Applicant; Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”), and Michael Nelmidia appeared on behalf of Board staff in a technical advisory capacity apart from the Board.

Proposed Variance Decision

KONE Monospace 300 Elevators (Group IV)

Hearing Date: March 23, 2022

3. Documentary and oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence:

Exhibit Number	Description of Exhibit
PD-1	Application(s) for Permanent Variance per section A.1 table
PD-2	OSHSB Notice of Hearing
PD-3	Board Staff Review of Variance Application
PD-4	Division Review of Variance Application
PD-5	Review Draft-1 Proposed Decision

Official notice is taken of the Board’s files, records, recordings and decisions concerning the Elevator Safety Order requirements from which variance shall issue. On March 23, 2002, the hearing and record closed, and the matter was taken under submission by the Hearing Officer.

C. Findings of Fact—Based on the record of this proceeding, the Board finds the following:

1. Each respective Applicant intends to utilize the KONE Inc. Monospace 300 type elevator, in the quantity, at the location, specified per the above Section A.1 table.
2. The installation contract for this elevator was or will be signed on or after May 1, 2008, thus making the elevator subject to the Group IV Elevator Safety Orders.
3. Each Applicant proposes to use hoisting ropes that are 8 mm in diameter which also consist of 0.51 mm diameter outer wires, in variance from the express requirements of ASME A17.1-2004, Section 2.20.4.
4. In relevant part, ASME A17.1-2004, Section 2.20.4 states:

2.20.4 Minimum Number and Diameter of Suspension Ropes

...The minimum diameter of hoisting and counterweight ropes shall be 9.5 mm (0.375 in.). Outer wires of the ropes shall be not less than 0.56 mm (0.024 in.) in diameter.

5. An intent of the afore cited requirement of ASME A17.1-2004, Section 2.20.4, is to ensure that the number, diameter, and construction of suspension ropes are adequate to provided safely robust and durable suspension means over the course of the ropes’ foreseen service life.

Proposed Variance Decision

KONE Monospace 300 Elevators (Group IV)

Hearing Date: March 23, 2022

6. KONE has represented to Division and Board staff, having established an engineering practice for purposes of Monospace 300 elevator design, of meeting or exceeding the minimum factor of safety of 12 for 8 mm suspension members, as required in ASME A17.1-2010, Section 2.20.3—under which, given that factor of safety, supplemental broken suspension member protection is not required.
7. Also, each Applicant proposes as a further means of maintaining safety equivalence, monitoring the rope in conformity with the criteria specified within the *Inspector's Guide to 6 mm Diameter Governor and 8 mm Diameter Suspension Ropes for KONE Elevators* (per Application attachment "B", or as thereafter revised by KONE subject to Division approval).
8. In addition, each Applicant has proposed to utilize 6 mm diameter governor ropes in variance from Title 8, Section 3141, incorporated ASME A17.1-2004, Section 2.18.5.1.
9. ASME A17.1-2004, Section 2.18.5.1, specifies, in relevant part:

2.18.5.1 Material and Factor of Safety.

... [Governor ropes] not less than 9.5 mm (0.375 in.) in diameter. The factor of safety of governor ropes shall be not less than 5...

10. The Board takes notice of Title 8, Elevator Safety Order Section 3141.7, subpart (a)(10):

A reduced diameter governor rope of equivalent construction and material to that required by ASME A17.1-2004, is permissible if the factor of safety as related to the strength necessary to activate the safety is 5 or greater;

11. Applicants propose use of 6mm governor rope having a safety factor of 5 or greater, in conformity with Section 3141.7(a)(10), the specific parameters of which, being expressly set out within Title 8, Elevator Safety Orders, take precedence over more generally referenced governor rope diameter requirements per ASME A17.1-2004, Section 2.18.5.1. Accordingly, the governor rope specifications being presently proposed, inclusive of a factor of safety of 5 or greater, would comply with current Title 8, Elevator Safety Orders requirements, and therefore not be subject to issuance of permanent variance.
12. Absent evident diminution in elevator safety, over the past decade the Board has issued numerous permanent variances for use in KONE (Ecospace) elevator systems of 8 mm diameter suspension rope materially similar to that presently proposed (e.g. OSHSB File Nos. 06-V-203, 08-V-245, and 13-V-303).

Proposed Variance Decision

KONE Monospace 300 Elevators (Group IV)

Hearing Date: March 23, 2022

13. As noted by the Board in OSHSB File Nos. 18-V-044, and 18-V-045, Decision and Order Findings, subpart B.17 (hereby incorporated by reference), the strength of wire rope operating as an elevator's suspension means does not remain constant over its years of projected service life. With increasing usage cycles, a reduction in the cross-sectional area of the wire rope normally occurs, resulting in decreased residual strength. This characteristic is of particular relevance to the present matter because, as also noted by Board staff, decreasing wire rope diameter is associated with a higher rate of residual strength loss. This foreseeable reduction in cross-sectional area primarily results from elongation under sheave rounding load, as well as from wear, and wire or strand breaks. However, these characteristics need not compromise elevator safety when properly accounted for in the engineering of elevator suspension means, and associated components.
14. The presently proposed wire rope is Wuxi Universal steel rope Co LTD. 8 mm 8x19S+8x7+PP, with a manufacturer rated breaking strength of 35.8 kN, and an outer wire diameter of less than 0.56 mm, but not less than 0.51 mm. Both Board staff and Division safety engineers have scrutinized the material and structural specifications, and performance testing data, of this particular proposed rope, and conclude it will provide for safety equivalent to ESO compliant 9.5 mm wire rope, with 0.56 mm outer wire (under conditions of use included within the below Decision and Order).
15. The applicant supplies tabulated data regarding the "Maximum Static Load on All Suspension Ropes." To obtain the tabulated data, the applicant uses the following formula derived from ASME A17.1 2004, Section 2.20.3:

$$W = (S \times N) / f$$

where

W = maximum static load imposed on all car ropes with the car and its rated load at any position in the hoistway

N = number of runs of rope under load. For 2:1 roping,

N shall be two times the number of ropes used, etc.

S = manufacturer's rated breaking strength of one rope

f = the factor of safety from Table 2.20.3

16. ASME A17.1-2010 Sections 2.20.3 and 2.20.4 utilize the same formula, but provide for use of suspension ropes having a diameter smaller than 9.5 mm, under specified conditions, key among them being that use of ropes having a diameter of between 8 mm to 9.5 mm be engineered with a factor of safety of 12 or higher. This is a higher minimum factor of safety than that proposed by Applicant, but a minimum

Proposed Variance Decision

KONE Monospace 300 Elevators (Group IV)

Hearing Date: March 23, 2022

recommended by both Board staff and Division as a condition of variance necessary to the achieving of safety equivalence to 9.5 mm rope.

17. Board staff and Division are in accord with Applicant, in proposing as a condition of safety equivalence, that periodic physical examination of the wire ropes be performed to confirm the ropes continue to meet the criteria set out in the (Application attachment) *Inspector's Guide to 6 mm Diameter Governor and 8 mm Diameter Suspension Ropes for KONE Elevators*. Adherence to this condition will provide an additional assurance of safety equivalence, regarding smaller minimum diameter suspension rope outer wire performance over the course of its service life.

18. Both Board staff, and Division, by way of written submissions to the record (Exhibits PD-3 and PD-4 respectively), and stated positions at hearing, are of the well informed opinion that grant of permanent variance, as limited and conditioned per the below Decision and Order will provide employment, places of employment, and subject conveyances, as safe and healthful as would prevail given non-variant conformity with the Elevator Safety Order requirements from which variance has been requested.

D. Conclusive Findings:

The above stated procedural prerequisites, legal authority, and factual findings, as further supported by the documentary record and hearing testimony in this matter, provide a substantive and reasonable basis of conclusion that: (1) Each Applicant has complied with the statutory and regulatory requirements that must be met before an application for permanent variance may be conditionally granted; and (2) a preponderance of the evidence establishes that each Applicants proposal, subject to all conditions and limitations set forth in the below Decision and Order, will provide equivalent safety and health to that which would prevail upon full compliance with the requirements of California Code of Regulation, Title 8, Elevator Safety Orders from which variance is being sought.

E. Decision and Order:

Each Application being the subject of this proceeding, per above Section A.1 table, is conditionally GRANTED, to the extent that each such Applicant shall be issued permanent variance from California Code of Regulations, Title 8, Section 3141 incorporated ASME A17.1-2004, Section 2.20.4, in as much as it precludes use of suspension rope of between 8 mm and 9.5 mm, or outer wire of between 0.51 mm and 0.56 mm in diameter, at such locations and numbers of Group IV KONE Monospace 300 elevators identified in each respective Application, subject to the following conditions:

1. The diameter of the hoisting steel ropes shall be not less than 8 mm (0.315 in) diameter and the roping ratio shall be two to one (2:1).

Proposed Variance Decision

KONE Monospace 300 Elevators (Group IV)

Hearing Date: March 23, 2022

2. The outer wires of the suspension ropes shall be not less than 0.51 mm (0.02 in.) in diameter.
3. The number of suspension ropes shall be not fewer than those specified per hereby incorporated Decision and Order Appendix 1 Table.
4. The ropes shall be inspected annually for wire damage (rouge, valley break etc.) in accordance with "KONE Inc. Inspector's Guide to 6 mm diameter and 8 mm diameter steel ropes for KONE Elevators" (per Application Exhibit B, or as thereafter amended by KONE subject to Division approval).
5. A rope inspection log shall be maintained and available in the elevator controller room / space at all times.
6. The elevator rated speed shall not exceed those speeds specified per the Decision and Order Appendix 1 Table.
7. The maximum suspended load shall not exceed those weights (plus 5%) specified per the Decision and Order Appendix 1 Table.
8. The opening to the hoistway shall be effectively barricaded when car top inspection, maintenance, servicing, or testing of the elevator equipment in the hoistway is required. If the service personnel must leave the area for any reason, the hoistway and control room doors shall be closed.
9. The installation shall meet the suspension wire rope factor of safety requirements of ASME A17.1-2013 Section 2.20.3.
10. Any Certified Qualified Conveyance Company performing inspections, maintenance, servicing or testing the elevators shall be provided a copy of this variance decision.
11. The Division shall be notified when the elevator is ready for inspection. The elevator shall be inspected by the Division and a "Permit to Operate" issued before the elevator is placed in service.
12. The Applicant shall comply with suspension means replacement reporting condition per hereby incorporated Decision and Order Appendix 2.
13. The Applicant shall notify its employees or their authorized representative(s), or both, of this order in the same way and to the same extent that employees and authorized representatives are to be notified of docketed permanent variance applications pursuant to California Code of Regulations, Title 8, Sections 411.2 and 411.3.

Proposed Variance Decision

KONE Monospace 300 Elevators (Group IV)

Hearing Date: March 23, 2022

14. This Decision and Order shall remain in effect unless modified or revoked upon application by the Applicant, affected employee(s), the Division of Occupational Safety and Health, or by the Board on its own motion, in accordance with procedures per Title 8, Division 1, Chapter 3.5.

Pursuant to California Code of Regulations, Title 8, Section 426(b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

Dated: March 24, 2022



Autumn Gonzalez, Hearing Officer

Appendix 1

	Monospace 300 Suspension Ropes Appendix 1 Table			
OSHSB File No.	Elevator ID	Minimum Quantity of Ropes (per Condition 3)	Maximum Speed in Feet per Minute (per Condition 6)	Maximum Suspended Load (per Condition 7)
21-V-601	1	3,500	7	12,247
21-V-601	2	3,500	7	12,247

Appendix 2

Suspension Means Replacement Reporting Condition

Beginning on the date the Board adopts this Proposed Decision and continuing for a period of two years, the Applicant shall report to the Division within 30 days any and all replacement activity performed on the elevator(s) pursuant to the requirements of ASME A17.1-2004, Section 8.6.3 involving the suspension means or suspension means fastenings. Further:

1. A separate report for each elevator shall be submitted, in a manner acceptable to the Division, to the following address (or to such other address as the Division might specify in the future): DOSH Elevator Unit, 2 MacArthur Place, Suite 700, Santa Ana, CA 92707, Attn: Engineering Section.
2. Each such report shall contain, but not necessarily be limited to, the following information:
 - a. The State-issued conveyance number, complete address, and OSHSB file number that identifies the permanent variance.
 - b. The business name, complete address, telephone number, and contact person of the elevator responsible party (presumably the Applicant or the subsequent holder of this variance).
 - c. The business name, complete address, telephone number, and Certified Qualified Conveyance Company (CQCC) certification number of the firm performing the replacement work.
 - d. The name (as listed on certification), Certified Competent Conveyance Mechanic (CCCM) certification number, certification expiration date, and signature of each CCCM performing the replacement work.
 - e. The date and time the elevator was removed from normal service for suspension replacement, the date and time the replacement work commenced, the date and time the replacement work was completed, and the date and time the elevator was returned to normal service.
 - f. A detailed description of, and clear color photographs depicting, (1) all the conditions that existed in the suspension components requiring their replacement and (2) any conditions that existed to cause damage or distress to the suspension components being replaced.

Proposed Variance Decision

KONE Monospace 300 Elevators (Group IV)

Hearing Date: March 23, 2022

- g. A detailed list of all elevator components adjusted, repaired, or replaced in conjunction with the suspension component replacement.
 - h. All information provided on the crosshead data plate per ASME A17.1-2004, Section 2.20.2.1, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - i. For the suspension means being replaced, all information provided on the data tag required per ASME A17.1-2004, Section 2.20.2.2, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - j. For the replacement suspension means, all information provided on the data tag required by ASME A17.1-2004, Section 2.20.2.2, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - k. Any other information requested by the Division regarding the replacement of the suspension means or fastenings.
3. In addition to the submission of the report to the Division, the findings of any testing, failure analysis, or other engineering evaluations performed on any portion of the replaced suspension components, or other elevator components replaced in conjunction therewith, shall be submitted to the Division referencing the information contained in above Appendix 2, Section 2, Subsection (a), above.

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application for
Permanent Variance regarding:

Schindler 3300 with SIL-Rated Drive
to De-energize Motor (Group IV)

OSHSB File No.: see Section 1 table of
Proposed Decision Dated: March 24, 2022

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached
PROPOSED DECISION by Autumn Gonzalez, Hearing Officer.

DAVID THOMAS, Chairman

BARBARA BURGEL, Member

KATHLEEN CRAWFORD, Member

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date of Adoption: April 21, 2022

THE FOREGOING VARIANCE DECISION WAS
ADOPTED ON THE DATE INDICATED ABOVE.
IF YOU ARE DISSATISFIED WITH THE
DECISION, A PETITION FOR REHEARING
MAY BE FILED BY ANY PARTY WITH THE
STANDARDS BOARD WITHIN TWENTY (20)
DAYS AFTER SERVICE OF THE DECISION.
YOUR PETITION FOR REHEARING MUST
FULLY COMPLY WITH THE REQUIREMENTS
OF CALIFORNIA CODE OF REGULATIONS,
TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be
posted for the Applicant's employees to
read, and/or a copy thereof must be
provided to the employees' Authorized
Representatives.

BEFORE THE
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
DEPARTMENT OF INDUSTRIAL RELATIONS
STATE OF CALIFORNIA

<p>In the Matter of Application for Permanent Variance Regarding:</p> <p>Schindler 3300 with SIL-Rated Drive to De-energize Drive Motor (Group IV)</p>	<p>OSHSB File Nos.: Per table, in Jurisdictional and Procedural Matters below</p> <p><u>PROPOSED DECISION</u></p> <p>Hearing Date: March 23, 2022</p>
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Jurisdictional and Procedural Matters

- Each below listed applicant (“Applicant”) has applied for permanent variance from certain provisions of the Elevator Safety Orders, found at title 8, of the California Code of Regulations, with respect to a conveyance, or conveyances, in the listed quantity, at the listed location:

Variance No.	Applicant Name	Variance Location Address	No. of Elevators
22-V-001	T-Rose Investments LLC	10234 4th Street Rancho Cucamonga, CA	1
22-V-010	All Peoples Community Center	822 E. 20th St. Los Angeles, CA	1
22-V-014	Cargan 1031, LLC	3935 Normal Street San Diego, CA	2
22-V-016	Summitrose Investments, LP	3920 Jefferson Blvd. Los Angeles, CA	2
22-V-026	Barstow Hospitality LLC	2551 Mercantile Way Barstow, CA	2
22-V-027	SN Gramercy 2626, LLC	3935 W. 8th Street, Los Angeles, CA	1
22-V-028	Digital 1550 Space Park, LLC	1550 Space Park Drive Santa Clara, CA	1
22-V-029	NCRC NSV, LP	1120 Nestor Way San Diego, CA	1
22-V-030	182 - 186 Virgil LLC	182 Virgil Ave. Los Angeles, CA	1
22-V-031	1000 Gardner LLC	1000 N. Gardner St. West Hollywood, CA	1

Proposed Variance Decision

Schindler 3300 with SIL-Rated Drive to De-energize Drive Motor (Group IV)

Hearing Date: March 23, 2022

2. This proceeding is conducted in accordance with Labor Code section 143, and California Code of Regulations, title 8, section 401, et. seq.
3. This hearing was held on March 23, 2022, in Sacramento, California, via teleconference, by Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Autumn Gonzalez, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with California Code of Regulations, title 8, section 426.
4. At the hearing, Jennifer Linares, with the Schindler Elevator Corporation, appeared on behalf of each Applicant; Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”), and Michael Nelmda appeared on behalf of Board staff, in a technical advisory role apart from the Board.
5. Oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence:

Exhibit Number	Description of Exhibit
PD-1	Permanent variance applications per section A.1 table
PD-2	OSHSB Notice of Hearing
PD-3	Board Staff Reviews of Variance Application
PD-4	Division Reviews of Variance Application
PD-5	Review Draft-1 Proposed Decision

Official notice taken of the Board’s rulemaking records, and variance decisions concerning the safety order requirements from which variance is requested. At close of hearing on March 23, 2022, the record was closed, and the matter taken under submission by the Hearing Officer.

Relevant Safety Order Provisions

Applicant seeks a permanent variance from section 3141 [ASME A.17.1-2004, sections 2.20.1, 2.20.2.1, 2.20.2.2(a), 2.20.2.2(f), 2.20.3, 2.20.4, 2.20.9.5.4, 2.26.1.4.4(a), 8.4.10.1.1(a)(2)(B), 2.14.1.7.1, and 2.26.9.6.1]. The relevant language of those sections are below.

1. Suspension Means

Section 3141 [ASME A17.1-2004, section 2.20.1, Suspension Means] states in part:

Elevator cars shall be suspended by steel wire ropes attached to the car frame or passing around sheaves attached to the car frame specified in 2.15.1. Ropes that have previously been installed and used on another installation shall not be

Proposed Variance Decision

Schindler 3300 with SIL-Rated Drive to De-energize Drive Motor (Group IV)

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reused. Only iron (low-carbon steel) or steel wire ropes, having the commercial classification "Elevator Wire Rope," or wire rope specifically constructed for elevator use, shall be used for the suspension of elevator cars and for the suspension of counterweights. The wire material for ropes shall be manufactured by the open-hearth or electric furnace process, or their equivalent.

Section 3141 [ASME A17.1-2004, section 2.20.2.1(b), On Crosshead Data Plate] states in part:

The crosshead data plate required by 2.16.3 shall bear the following wire-rope data:

(b) the diameter in millimeters (mm) or inches (in.)

Section 3141 [ASME A17.1-2004, section 2.20.2.2(a) and (f) On Rope Data Tag] states in part:

A metal data tag shall be securely attached-to-one of the wire-rope fastenings. This data tag shall bear the following wire-rope data:

(a) the diameter in millimeters (mm) or inches (in.)

[...]

(f) whether the ropes were non preformed or preformed

Section 3141 [ASME A17.1-2004, section 2.20.3, Factor of Safety] states:

The factor of safety of the suspension wire ropes shall be not less than shown in Table 2.20.3. Figure 8.2.7 gives the minimum factor of safety for intermediate rope speeds. The factor of safety shall be based on the actual rope speed corresponding to the rated speed of the car.

The factor of safety shall be calculated by the following formula:

$$f = \frac{S \times N}{W}$$

where:

N= number of runs of rope under load. For 2:1 roping, N shall be two times the number of ropes used, etc.

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S= manufacturer's rated breaking strength of one rope

W= maximum static load imposed on all car ropes with the car and its rated load at any position in the hoistway

Section 3141 [ASME A17.1-2004, section 2.20.4, Minimum Number and Diameter of Suspension Ropes] states:

The minimum number of hoisting ropes used shall be three for traction elevators and two for drum-type elevators.

Where a car counterweight is used, the number of counterweight ropes used shall be not less than two.

The term "diameter," where used in reference to ropes, shall refer to the nominal diameter as given by the rope manufacturer.

The minimum diameter of hoisting and counterweight ropes shall be 9.5 mm (0.375 in.). Outer wires of the ropes shall be not less than 0.56 mm (0.024 in.) in diameter.

Section 3141 [ASME A17.1-2004, section 2.20.9.3.4] states:

Cast or forged steel rope sockets, shackle rods, and their connections shall be made of unwelded steel, having an elongation of not less than 20% in a gauge length of 50 mm (2 in.), when measured in accordance with ASTM E 8, and conforming to ASTM A 668, Class B for forged steel, and ASTM A 27, Grade 60/30 for cast steel, and shall be stress relieved. Steels of greater strength shall be permitted, provided they have an elongation of not less than 20% in a length of 50 mm (2 in.).

Section 3141 [ASME A17.1-2004, section 2.20.9.5.4] states:

When the rope has been seated in the wedge socket by the load on the rope, the wedge shall be visible, and at least two wire-rope retaining clips shall be provided to attach the termination side to the load-carrying side of the rope (see Fig. 2.20.9.5). The first clip shall be placed a maximum of 4 times the rope diameter above the socket, and the second clip shall be located within 8 times the rope diameter above the first clip. The purpose of the two clips is to retain the wedge and prevent the rope from slipping in the socket should the load on the rope be removed for any reason. The clips shall be designed and installed so that they do not distort or damage the rope in any manner.

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Schindler 3300 with SIL-Rated Drive to De-energize Drive Motor (Group IV)

Hearing Date: March 23, 2022

2. Inspection Transfer Switch

Section 3141[ASME A17.1-2004, section 2.26.1.4.4(a), Machine Room Inspection Operation] states:

When machine room inspection operation is provided, it shall conform to 2.26.1.4.1, and the transfer switch shall be

(a) located in the machine room[.]

3. Seismic Reset Switch

Section 3141[ASME A17.1-2004, section 8.4.10.1.1(a)(2)(b), Earthquake Equipment] states:

(a) All traction elevators operating at a rated speed of 0.75 m/s (150 ft/min) or more and having counterweights located in the same hoistway shall be provided with the following:

(1) seismic zone 3 or greater: a minimum of one seismic switch per building

(2) seismic zone 2 or greater:

(a) a displacement switch for each elevator

(b) an identified momentary reset button or switch for each elevator, located in the control panel in the elevator machine room

4. Car-top Railings

Section 3141[ASME A17.1-2004, section 2.14.1.7.1] states:

A standard railing conforming to 2.10.2 shall be provided on the outside perimeter of the car top on all sides where the perpendicular distance between the edges of the car top and the adjacent hoistway enclosure exceeds 300 mm (12 in.) horizontal clearance.

5. SIL-Rated System to Inhibit Current Flow to AC Drive Motor

Section 3141[ASME A17.1-2004, section 2.26.9.6.1] states:

Two separate means shall be provided to independently inhibit the flow of alternating current through the solid state devices that connect the direct current power source to the alternating-current driving motor. At least one of the means shall be an electromechanical relay.

Proposed Variance Decision

Schindler 3300 with SIL-Rated Drive to De-energize Drive Motor (Group IV)

Hearing Date: March 23, 2022

Findings of Fact

Based on the record of this proceeding, the Board finds the following:

1. Applicant intends to utilize Schindler model 3300 MRL elevator cars at the locations listed in Jurisdictional and Procedural Matters, section 1.
2. The installation contract for these elevator was or will be signed on or after May 1, 2008, thus making the elevator subject to the Group IV Elevator Safety Orders.
3. The Schindler model 3300 MRL elevator cars are not supported by circular steel wire ropes, as required by the Elevator Safety Orders (ESO). They utilize non-circular elastomeric-coated steel belts and specialized suspension means fastenings.
4. No machine room is provided, preventing the inspection transfer switch from being located in the elevator machine room. The lack of machine room also prevents the seismic reset switch from being located in the elevator machine room.
5. Applicant proposes to relocate the inspection transfer switch and seismic reset switch in an alternative enclosure.
6. The driving machine and governor are positioned in the hoistway and restrict the required overhead clearance to the elevator car top.
7. Applicant proposes to insert the car-top railings at the perimeter of the car top.
8. Applicant intends to use an elevator control system, model CO NX100NA, with a standalone, solid-state motor control drive system that includes devices and circuits having a Safety Integrity Level (SIL) rating to execute specific elevator safety functions.

Conclusive Findings:

The above-stated procedural prerequisites, legal authority, and factual findings, as further supported by the documentary record and hearing testimony in this matter, provide a substantive and reasonable basis of conclusion that: (1) Applicant has complied with the statutory and regulatory requirements that must be met before an application for permanent variance may be conditionally granted; and (2) a preponderance of the evidence establishes that Applicant's proposal, subject to all conditions and limitations set forth in the below Decision and Order, will provide equivalent safety and health to that which would prevail upon full compliance with the requirements of California Code of Regulation, title 8, Elevator Safety Orders from which variance is being sought.

Proposed Variance Decision

Schindler 3300 with SIL-Rated Drive to De-energize Drive Motor (Group IV)

Hearing Date: March 23, 2022

Decision and Order:

Each Application being the subject of this proceeding, per the table in Jurisdictional and Procedural Matters, section 1 above, is conditionally GRANTED, to the extent that each such Applicant shall be issued permanent variance from California Code of Regulations, title 8, section 3141 shall be GRANTED subject to the following conditions and limitations:

Elevator Safety Orders:

- Suspension Means: 2.20.1, 2.20.2.1, 2.20.2.2(a), 2.20.2.2(f), 2.20.3, 2.20.4, 2.20.9.3.4, and 2.20.9.5.4 (Only to the extent necessary to permit the use of the Elastomeric-coated Steel Belts proposed by the Applicant, in lieu of circular steel suspension ropes.);
- Inspection transfer switch: 2.26.1.4.4(a) (Only to the extent necessary to permit the inspection transfer switch to reside at a location other than the machine room);
- Seismic reset switch: 8.4.10.1.1(a)(2)(b) (Only to the extent necessary to permit the seismic reset switch to reside at a location other than the machine room. room);
- Car-Top Railing: 2.14.1.7.1 (Only to the extent necessary to permit the use of the car-top railing system proposed by the Applicant, where the railing system is located inset from the elevator car top perimeter);
- Means of Removing Power: 2.26.9.6.1 (Only to the extent necessary to permit the use of SIL-rated devices and circuits as a means to remove power from the AC driving motor, where the redundant monitoring of electrical protective devices is required by the Elevator Safety Orders).

Conditions:

1. The elevator suspension system shall comply to the following:
 - a. The suspension traction media (STM) members and their associated fastenings shall conform to the applicable requirements of ASME A17.1-2013, sections:
 - 2.20.4.3 – Minimum Number of Suspension Members
 - 2.20.3 – Factor of Safety
 - 2.20.9 – Suspension Member Fastening
 - b. The Applicant shall not utilize the elevator unless the manufacturer has written procedures for the installation, maintenance, inspection and testing of the STM members and fastenings and related monitoring and detection systems and criteria for STM replacement, and the Applicant shall make those procedures and criteria

Proposed Variance Decision

Schindler 3300 with SIL-Rated Drive to De-energize Drive Motor (Group IV)

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available to the Certified Competent Conveyance Mechanic (CCCM) at the location of the elevator, and to the Division upon request.

STM member mandatory replacement criteria shall include:

- i. Any exposed wire, strand or cord;
 - ii. Any wire, strand or cord breaks through the elastomeric coating;
 - iii. Any evidence of rouging (steel tension element corrosion) on any part of the elastomeric-coated steel suspension member;
 - iv. Any deformation in the elastomeric suspension member such as, but not limited to, kinks or bends;
- c. Traction drive sheaves must have a minimum diameter of 72 mm. The maximum speed of STM members running on 72 mm, 87 mm and 125 mm drive sheaves shall be no greater than 2.5 m/s, 6.0 m/s and 8.0 m/s respectively.
- d. If any one STM member needs replacement, the complete set of suspension members on the elevator shall be replaced. Exception: if a new suspension member is damaged during installation, and prior to any contemporaneously installed STM having been placed into service, it is permissible to replace the individual damaged suspension member. STM members that have been installed on another installation shall not be re-used.
- e. A traction loss detection means shall be provided that conforms to the requirements of ASME A17.1-2013, section 2.20.8.1. The means shall be tested for correct function annually in accordance with ASME A17.1-2013, section 8.6.4.19.12.
- f. A broken suspension member detection means shall be provided that conforms to the requirements of ASME A17.1-2013, section 2.20.8.2. The means shall be tested for correct function annually in accordance with ASME A17.1-2013, section 8.6.4.19.13(a).
- g. An elevator controller integrated bend cycle monitoring system shall monitor actual STM bend cycles, by means of continuously counting, and storing in nonvolatile memory, the number of trips that the STM makes traveling, and thereby being bent, over the elevator sheaves. The bend cycle limit monitoring means shall automatically stop the car normally at the next available landing before the bend cycle correlated residual strength of any single STM member drops below 80 percent of full rated strength. The monitoring means shall prevent the car from restarting. The bend cycle monitoring system shall be tested annually in accordance with the procedures required by condition 1b above.
- h. The elevator shall be provided with a device to monitor the remaining residual strength of each STM member. The device shall conform to the requirements of

Proposed Variance Decision

Schindler 3300 with SIL-Rated Drive to De-energize Drive Motor (Group IV)

Hearing Date: March 23, 2022

- Division Circular Letter E-10-04, a copy of which is attached hereto as Exhibit 1 and incorporated herein by reference.
- i. The elevator crosshead data plate shall comply with the requirements of ASME A17.1-2013, section 2.20.2.1.
 - j. A suspension means data tag shall be provided that complies with the requirements of ASME A17.1-2013, section 2.20.2.2.
 - k. Comprehensive visual inspections of the entire length of each and all installed suspension members, to the criteria developed in condition 1b, shall be conducted and documented every six months by a CCCM.
 - l. The Applicant shall be subject to the requirements set out in Exhibit 2 of this Decision and Order, "Suspension Means Replacement Reporting Condition," Incorporated herein by this reference.
 - m. Records of all tests and inspections shall be maintenance records subject to ASME A17.1-2004, sections 8.6.1.2 and 8.6.1.4, respectively.
2. If the inspection transfer switch required by ASME A17.1-2004, section 2.26.1.4.4 does not reside in a machine room, that switch shall not reside in the elevator hoistway. The switch shall reside in the control/machinery room/space containing the elevator's control equipment in an enclosure secured by a lock openable by a Group 1 security key. The enclosure is to remain locked at all times when not in use.
 3. If the seismic reset switch does not reside in the machine room, that switch shall not reside in the elevator hoistway. The switch shall reside in the control/machinery room/space containing the elevator's control equipment in an enclosure secured by a lock openable by a Group 1 security key. The enclosure is to remain locked at all times when not in use.
 4. If there is an inset car-top railing:
 - a. Serviceable equipment shall be positioned so that mechanics and inspectors do not have to climb on the railings to perform adjustments, maintenance, repairs or inspections. The Applicant shall not permit anyone to stand or climb over the car-top railing.
 - b. The distance that the railing can be inset shall be limited to not more than 6 inches.
 - c. All exposed areas of the car top outside the car-top railing where the distance from the railing to the edge of the car top exceeds 2 inches, shall be beveled with metal, at an angle of not less than 75 degrees with the horizontal, from the mid or top rail to

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Schindler 3300 with SIL-Rated Drive to De-energize Drive Motor (Group IV)

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the outside of the car top, such that no person or object can stand, sit, kneel, rest, or be placed in the exposed areas.

- d. The top of the beveled area and/or car top outside the railing shall be clearly marked. The markings shall consist of alternating 4-inch diagonal red and white stripes.
- e. The applicant shall provide durable signs with lettering not less than 1/2 inch on a contrasting background on each inset railing. Each sign shall state:

**CAUTION
STAY INSIDE RAILING
NO LEANING BEYOND RAILING
NO STEPPING ON, OR BEYOND, RAILING**

- f. The Group IV requirements for car-top clearances shall be maintained (car-top clearances outside the railing will be measured from the car top and not from the required bevel).
5. The SIL-rated devices and circuits used to inhibit electrical current flow in accordance with ASME A17.1-2004, section 2.26.9.6.1 shall comply with the following:
- a. The SIL-rated devices and circuits shall consist of a Variodyn SIL-3 rated Regenerative, Variable Voltage Variable Frequency (VVVF) motor drive unit, model VAF013 or VAF023, labeled or marked with the SIL rating (not less than SIL 3), the name or mark of the certifying organization, and the SIL certification number (968/FSP 1556.00), and followed by the applicable revision number (as in 968/FSP 1556.00/19).
 - b. The devices and circuits shall be certified for compliance with the applicable requirements of ASME A17.1-2013, section 2.26.4.3.2.
 - c. The access door or cover of the enclosures containing the SIL-rated components shall be clearly labeled or tagged on their exterior with the statement:

**Assembly contains SIL-rated devices.
Refer to Maintenance Control Program and
wiring diagrams prior to performing work.**

- d. Unique maintenance procedures or methods required for the inspection, testing, or replacement of the SIL-rated circuits shall be developed and a copy maintained in the elevator machine/control room/space. The procedures or methods shall include clear color photographs of each SIL-rated component, with notations identifying parts and locations.

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- e. Wiring diagrams that include part identification, SIL, and certification information shall be maintained in the elevator machine/control room/space.
 - f. A successful test of the SIL-rated devices and circuits shall be conducted initially and not less than annually in accordance with the testing procedure. The test shall demonstrate that SIL-rated devices, safety functions, and related circuits operate as intended.
 - g. Any alterations to the SIL-rated devices and circuits shall be made in compliance with the Elevator Safety Orders. If the Elevator Safety Orders do not contain specific provisions for the alteration of SIL-rated devices, the alterations shall be made in conformance with ASME A17.1-2013, section 8.7.1.9.
 - h. Any replacement of the SIL-rated devices and circuits shall be made in compliance with the Elevator Safety Orders. If the Elevator Safety Orders do not contain specific provisions for the replacement of SIL-rated devices, the replacement shall be made in conformance with ASME A17.1-2013, section 8.6.3.14.
 - i. Any repairs to the SIL-rated devices and circuits shall be made in compliance with the Elevator Safety Orders. If the Elevator Safety Orders do not contain specific provisions for the repair of SIL-rated devices, the repairs shall be made in conformance with ASME A17.1-2013, section 8.6.2.6.
 - j. Any space containing SIL-rated devices and circuits shall be maintained within the temperature and humidity range specified by Schindler Elevator Corporation. The temperature and humidity range shall be posted on each enclosure containing SIL-rated devices and circuits.
 - k. Field changes to the SIL-rated system are not permitted. Any changes to the SIL-rated system's devices and circuitry will require recertification and all necessary updates to the documentation and diagrams required by conditions d. and e. above.
6. The Division shall be notified when the elevator is ready for inspection. The elevator shall be inspected by the Division, and all applicable requirements met, including conditions of this permanent variance, prior to a Permit to Operate the elevator being issued. The elevator shall not be placed in service prior to the Permit to Operate being issued by Division.
 7. The Applicant shall notify its employees or their authorized representative(s), or both, of this order in the same way that the Applicant was required to notify them of the docketed application for permanent variance per California Code of Regulations, title 8, sections 411.2 and 411.3.
 8. This Decision and Order shall remain in effect unless modified or revoked upon application by the Applicant, affected employee(s), the Division of Occupational Safety and Health, or by

Proposed Variance Decision

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the Board on its own motion, in the procedural manner prescribed per title 8, Chapter 3.5, Subchapter 1.

Pursuant to California Code of Regulations, title 8, section 426(b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

DATED: March 24, 2022



Autumn Gonzalez, Hearing Officer

*Proposed Variance Decision
Schindler 3300 with SIL-Rated Drive to De-energize Drive Motor (Group IV)
Hearing Date: March 23, 2022*

EXHIBIT 1

October 6, 2010

CIRCULAR LETTER E-10-04

TO: Installers, Manufacturers of Conveyances and Related Equipment and Other Interested Parties

SUBJECT: Coated Steel Belt Monitoring

The Elevator Safety Orders require routine inspection of the suspension means of an elevator to assure its safe operation.

The California Labor Code section 7318 allows the Division to promulgate special safety orders in the absence of regulation.

As it is not possible to see the steel cable suspension means of a Coated Steel Belt, a monitoring device which has been accepted by the Division is required on all Coated Steel Belts which will automatically stop the car if the residual strength of any belt drops below 60%. The Device shall prevent the elevator from restarting after a normal stop at a landing.

The monitoring device must be properly installed and functional. A functioning device may be removed only after a determination has been made that the residual strength of each belt exceeds 60%. These findings and the date of removal are to be conspicuously documented in the elevator machine room. The removed device must be replaced or returned to proper service within 30 days.

If upon routine inspection, the monitoring device is found to be in a non-functional state, the date and findings are to be conspicuously documented in the elevator machine room.

If upon inspection by the Division, the monitoring device is found to be non-functional or removed, and the required documentation is not in place, the elevator will be removed from service.

If the device is removed to facilitate belt replacement, it must be properly installed and functional before the elevator is returned to service.

A successful test of the device's functionality shall be conducted once a year.

This circular does not preempt the Division from adopting regulations in the future, which may address the monitoring of Coated Steel Belts or any other suspension means.

This circular does not create an obligation on the part of the Division to permit new conveyances utilizing Coated Steel Belts.

Debra Tudor
Principal Engineer
DOSH-Elevator Unit HQS

EXHIBIT 2

Suspension Means – Replacement Reporting Condition

Beginning on the date the Board adopts this Proposed Decision and continuing for a period of two years, the Applicant shall report to the Division within 30 days any and all replacement activity performed on the elevator(s) pursuant to the requirements of ASME A17.1-2004, section 8.6.3 involving the suspension means or suspension means fastenings. Further:

1. A separate report for each elevator shall be submitted, in a manner acceptable to the Division, to the following address (or to such other address as the Division might specify in the future): DOSH Elevator Unit, 2 MacArthur Pl., Suite 700, Santa Ana, CA 92707, Attn: Engineering section.
2. Each such report shall contain, but not necessarily be limited to, the following information:
 - a. The State-issued conveyance number, complete address, and OSHSB file number that identifies the permanent variance.
 - b. The business name, complete address, telephone number, and contact person of the elevator responsible party (presumably the Applicant or the subsequent holder of this variance).
 - c. The business name, complete address, telephone number, and Certified Qualified Conveyance Company (CQCC) certification number of the firm performing the replacement work.
 - d. The name (as listed on certification), Certified Competent Conveyance Mechanic (CCCM) certification number, certification expiration date, and signature of each CCCM performing the replacement work.
 - e. The date and time the elevator was removed from normal service for suspension replacement, the date and time the replacement work commenced, the date and time the replacement work was completed, and the date and time the elevator was returned to normal service.
 - f. A detailed description of, and clear color photographs depicting, (1) all the conditions that existed in the suspension components requiring their replacement and (2) any conditions that existed to cause damage or distress to the suspension components being replaced.
 - g. A detailed list of all elevator components adjusted, repaired, or replaced in conjunction with the suspension component replacement.

Proposed Variance Decision

Schindler 3300 with SIL-Rated Drive to De-energize Drive Motor (Group IV)

Hearing Date: March 23, 2022

- h. All information provided on the crosshead data plate per ASME A17.1-2004, section 2.20.2.1, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - i. For the suspension means being replaced, all information provided on the data tag required per ASME A17.1-2004, section 2.20.2.2, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - j. For the replacement suspension means, all information provided on the data tag required by ASME A17.1-2004, section 2.20.2.2, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - k. Any other information requested by the Division regarding the replacement of the suspension means or fastenings.
3. In addition to the submission of the report to the Division, the findings of any testing, failure analysis, or other engineering evaluations performed on any portion of the replaced suspension components, or other elevator components replaced in conjunction therewith, shall be submitted to the Division referencing the information contained in item 2a above.

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application for
Permanent Variance regarding:

KONE Monospace 500 Elevators (Group IV)

OSHSB File No.: see Section A.1 table of
Proposed Decision Dated: March 24, 2022

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached
PROPOSED DECISION by Autumn Gonzalez, Hearing Officer.

DAVID THOMAS, Chairman

BARBARA BURGEL, Member

KATHLEEN CRAWFORD, Member

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date of Adoption: April 21, 2022

THE FOREGOING VARIANCE DECISION WAS
ADOPTED ON THE DATE INDICATED ABOVE.
IF YOU ARE DISSATISFIED WITH THE
DECISION, A PETITION FOR REHEARING
MAY BE FILED BY ANY PARTY WITH THE
STANDARDS BOARD WITHIN TWENTY (20)
DAYS AFTER SERVICE OF THE DECISION.
YOUR PETITION FOR REHEARING MUST
FULLY COMPLY WITH THE REQUIREMENTS
OF CALIFORNIA CODE OF REGULATIONS,
TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be
posted for the Applicant's employees to
read, and/or a copy thereof must be
provided to the employees' Authorized
Representatives.

BEFORE THE
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
DEPARTMENT OF INDUSTRIAL RELATIONS
STATE OF CALIFORNIA

In the Matter of Application for Permanent Variance Regarding: KONE Monospace 500 Elevators (Group IV)	OSHSB File Nos.: See Section A.1 Table Below <u>PROPOSED DECISION</u> Hearing Date: March 23, 2022
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A. Subject Matter:

1. Each below listed applicant (“Applicant”) applied for a permanent variance from provisions of the Elevator Safety Orders, found at Title 8 of the California Code of Regulations, with respect to a conveyance, or conveyances, in the listed quantity, at the listed location:

Variance No.	Applicant Name	Variance Location Address	No. of Elevators
22-V-002	Ogden Garden LP	951 S Ogden Dr. Los Angeles, CA	1

2. The subject Title 8, safety order requirements are set out within California Code of Regulations, Title 8, Section 3141 incorporated ASME A17.1-2004, Sections 2.18.5.1 and 2.20.4.

B. Procedural:

1. This hearing was held on March 23, 2022, in Sacramento, California, via teleconference, by delegation of the Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Autumn Gonzalez, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with California Code of Regulations, Title 8, Section 426.
2. At the hearing, Manish Sablok, with KONE, Inc., appeared on behalf of each Applicant; Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”), and Michael Nelmida appeared on behalf of Board staff in a technical advisory capacity apart from the Board.

*Proposed Variance Decision
 KONE Monospace 500 Elevators (Group IV)
 Hearing Date: March 23, 2022*

3. Documentary and oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence:

Exhibit Number	Description of Exhibit
PD-1	Application(s) for Permanent Variance per section A.1 table
PD-2	OSHSB Notice of Hearing
PD-3	Board Staff Review of Variance Application
PD-4	Division Review of Variance Application
PD-5	Review Draft-1 Proposed Decision

Official notice is taken of the Board’s files, records, recordings and decisions concerning the Elevator Safety Order requirements from which variance shall issue. On March 23, 2022 , the hearing and record closed, and the matter was taken under submission by the Hearing Officer.

C. Findings of Fact—Based on the record of this proceeding, the Board finds the following:

1. Each respective Applicant intends to utilize the KONE Inc. Monospace 500 type elevator, in the quantity, at the location, specified per the above Section A.1 table.
2. The installation contract for this elevator was or will be signed on or after May 1, 2008, thus making the elevator subject to the Group IV Elevator Safety Orders.
3. Each Applicant proposes to use hoisting ropes that are 8 mm in diameter which also consist of 0.51 mm diameter outer wires, in variance from the express requirements of ASME A17.1-2004, Section 2.20.4.
4. In relevant part, ASME A17.1-2004, Section 2.20.4 states:

2.20.4 Minimum Number and Diameter of Suspension Ropes

...The minimum diameter of hoisting and counterweight ropes shall be 9.5 mm (0.375 in.). Outer wires of the ropes shall be not less than 0.56 mm (0.024 in.) in diameter.

5. An intent of the afore cited requirement of ASME A17.1-2004, Section 2.20.4, is to ensure that the number, diameter, and construction of suspension ropes are adequate to provided safely robust and durable suspension means over the course of the ropes’ foreseen service life.

Proposed Variance Decision

KONE Monospace 500 Elevators (Group IV)

Hearing Date: March 23, 2022

6. KONE has represented to Division and Board staff, having established an engineering practice for purposes of Monospace 500 elevator design, of meeting or exceeding the minimum factor of safety of 12 for 8 mm suspension members, as required in ASME A17.1-2010, Section 2.20.3—under which, given that factor of safety, supplemental broken suspension member protection is not required.
7. Also, each Applicant proposes as a further means of maintaining safety equivalence, monitoring the rope in conformity with the criteria specified within the *Inspector's Guide to 6 mm Diameter Governor and 8 mm Diameter Suspension Ropes for KONE Elevators* (per Application attachment "B", or as thereafter revised by KONE subject to Division approval).
8. In addition, each Applicant has proposed to utilize 6 mm diameter governor ropes in variance from Title 8, Section 3141, incorporated ASME A17.1-2004, Section 2.18.5.1.
9. ASME A17.1-2004, Section 2.18.5.1, specifies, in relevant part:

2.18.5.1 Material and Factor of Safety.

... [Governor ropes] not less than 9.5 mm (0.375 in.) in diameter. The factor of safety of governor ropes shall be not less than 5...

10. The Board takes notice of Title 8, Elevator Safety Order Section 3141.7, subpart (a)(10):

A reduced diameter governor rope of equivalent construction and material to that required by ASME A17.1-2004, is permissible if the factor of safety as related to the strength necessary to activate the safety is 5 or greater;

11. Applicants propose use of 6mm governor rope having a safety factor of 5 or greater, in conformity with Section 3141.7(a)(10), the specific parameters of which, being expressly set out within Title 8, Elevator Safety Orders, take precedence over more generally referenced governor rope diameter requirements per ASME A17.1-2004, Section 2.18.5.1. Accordingly, the governor rope specifications being presently proposed, inclusive of a factor of safety of 5 or greater, would comply with current Title 8, Elevator Safety Orders requirements, and therefore not be subject to issuance of permanent variance.
12. Absent evident diminution in elevator safety, over the past decade the Board has issued numerous permanent variances for use in KONE (Ecospace) elevator systems of 8 mm diameter suspension rope materially similar to that presently proposed (e.g. OSHSB File Nos. 06-V-203, 08-V-245, and 13-V-303).

Proposed Variance Decision

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13. As noted by the Board in OSHSB File Nos. 18-V-044, and 18-V-045, Decision and Order Findings, subpart B.17 (hereby incorporated by reference), the strength of wire rope operating as an elevator's suspension means does not remain constant over its years of projected service life. With increasing usage cycles, a reduction in the cross-sectional area of the wire rope normally occurs, resulting in decreased residual strength. This characteristic is of particular relevance to the present matter because, as also noted by Board staff, decreasing wire rope diameter is associated with a higher rate of residual strength loss. This foreseeable reduction in cross-sectional area primarily results from elongation under sheave rounding load, as well as from wear, and wire or strand breaks. However, these characteristics need not compromise elevator safety when properly accounted for in the engineering of elevator suspension means, and associated components.
14. The presently proposed wire rope is Wuxi Universal steel rope Co LTD. 8 mm 8x19S+8x7+PP, with a manufacturer rated breaking strength of 35.8 kN, and an outer wire diameter of less than 0.56 mm, but not less than 0.51 mm. Both Board staff and Division safety engineers have scrutinized the material and structural specifications, and performance testing data, of this particular proposed rope, and conclude it will provide for safety equivalent to ESO compliant 9.5 mm wire rope, with 0.56 mm outer wire (under conditions of use included within the below Decision and Order).
15. The applicant supplies tabulated data regarding the "Maximum Static Load on All Suspension Ropes." To obtain the tabulated data, the applicant uses the following formula derived from ASME A17.1 2004, Section 2.20.3:

$$W = (S \times N) / f$$

where

W = maximum static load imposed on all car ropes with the car and its rated load at any position in the hoistway

N = number of runs of rope under load. For 2:1 roping,

N shall be two times the number of ropes used, etc.

S = manufacturer's rated breaking strength of one rope

f = the factor of safety from Table 2.20.3

16. ASME A17.1-2010 Sections 2.20.3 and 2.20.4 utilize the same formula, but provide for use of suspension ropes having a diameter smaller than 9.5 mm, under specified conditions, key among them being that use of ropes having a diameter of between 8 mm to 9.5 mm be engineered with a factor of safety of 12 or higher. This is a higher minimum factor of safety than that proposed by Applicant, but a minimum

recommended by both Board staff and Division as a condition of variance necessary to the achieving of safety equivalence to 9.5 mm rope.

17. Board staff and Division are in accord with Applicant, in proposing as a condition of safety equivalence, that periodic physical examination of the wire ropes be performed to confirm the ropes continue to meet the criteria set out in the (Application attachment) *Inspector's Guide to 6 mm Diameter Governor and 8 mm Diameter Suspension Ropes for KONE Elevators*. Adherence to this condition will provide an additional assurance of safety equivalence, regarding smaller minimum diameter suspension rope outer wire performance over the course of its service life.
18. Both Board staff, and Division, by way of written submissions to the record (Exhibits PD-3 and PD-4 respectively), and stated positions at hearing, are of the well informed opinion that grant of permanent variance, as limited and conditioned per the below Decision and Order will provide employment, places of employment, and subject conveyances, as safe and healthful as would prevail given non-variant conformity with the Elevator Safety Order requirements from which variance has been requested.

D. Conclusive Findings:

The above stated procedural prerequisites, legal authority, and factual findings, as further supported by the documentary record and hearing testimony in this matter, provide a substantive and reasonable basis of conclusion that: (1) Each Applicant has complied with the statutory and regulatory requirements that must be met before an application for permanent variance may be conditionally granted; and (2) a preponderance of the evidence establishes that each Applicants proposal, subject to all conditions and limitations set forth in the below Decision and Order, will provide equivalent safety and health to that which would prevail upon full compliance with the requirements of California Code of Regulation, Title 8, Elevator Safety Orders from which variance is being sought.

E. Decision and Order:

Each Application being the subject of this proceeding, per above Section A.1 table, is conditionally GRANTED, to the extent that each such Applicant shall be issued permanent variance from California Code of Regulations, Title 8, Section 3141 incorporated ASME A17.1-2004, Section 2.20.4, in as much as it precludes use of suspension rope of between 8 mm and 9.5 mm, or outer wire of between 0.51 mm and 0.56 mm in diameter, at such locations and numbers of Group IV KONE Monospace 500 elevators identified in each respective Application, subject to the following conditions:

1. The diameter of the hoisting steel ropes shall be not less than 8 mm (0.315 in) diameter and the roping ratio shall be two to one (2:1).

Proposed Variance Decision

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2. The outer wires of the suspension ropes shall be not less than 0.51 mm (0.02 in.) in diameter.
3. The number of suspension ropes shall be not fewer than those specified per hereby incorporated Decision and Order Appendix 1 Table.
4. The ropes shall be inspected annually for wire damage (rouge, valley break etc.) in accordance with "KONE Inc. Inspector's Guide to 6 mm diameter and 8 mm diameter steel ropes for KONE Elevators" (per Application Exhibit B, or as thereafter amended by KONE subject to Division approval).
5. A rope inspection log shall be maintained and available in the elevator controller room / space at all times.
6. The elevator rated speed shall not exceed those speeds specified per the Decision and Order Appendix 1 Table.
7. The maximum suspended load shall not exceed those weights (plus 5%) specified per the Decision and Order Appendix 1 Table.
8. The opening to the hoistway shall be effectively barricaded when car top inspection, maintenance, servicing, or testing of the elevator equipment in the hoistway is required. If the service personnel must leave the area for any reason, the hoistway and control room doors shall be closed.
9. The installation shall meet the suspension wire rope factor of safety requirements of ASME A17.1-2013 Section 2.20.3.
10. Any Certified Qualified Conveyance Company performing inspections, maintenance, servicing or testing the elevators shall be provided a copy of this variance decision.
11. The Division shall be notified when the elevator is ready for inspection. The elevator shall be inspected by the Division and a "Permit to Operate" issued before the elevator is placed in service.
12. The Applicant shall comply with suspension means replacement reporting condition per hereby incorporated Decision and Order Appendix 2.
13. The Applicant shall notify its employees or their authorized representative(s), or both, of this order in the same way and to the same extent that employees and authorized representatives are to be notified of docketed permanent variance applications pursuant to California Code of Regulations, Title 8, Sections 411.2 and 411.3.

Proposed Variance Decision

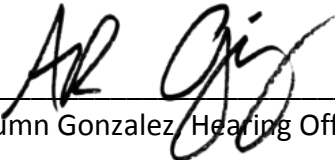
KONE Monospace 500 Elevators (Group IV)

Hearing Date: March 23, 2022

14. This Decision and Order shall remain in effect unless modified or revoked upon application by the Applicant, affected employee(s), the Division of Occupational Safety and Health, or by the Board on its own motion, in accordance with procedures per Title 8, Division 1, Chapter 3.5.

Pursuant to California Code of Regulations, Title 8, Section 426(b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

Dated: March 24, 2022



Autumn Gonzalez, Hearing Officer

Appendix 1

Monospace 500 Suspension Ropes Appendix 1 Table				
OSHSB File No.	Elevator ID	Minimum Quantity of Ropes (per Condition 3)	Maximum Speed in Feet per Minute (per Condition 6)	Maximum Suspended Load (per Condition 7)
22-V-002	1	8	200	13,207

Appendix 2

Suspension Means Replacement Reporting Condition

Beginning on the date the Board adopts this Proposed Decision and continuing for a period of two years, the Applicant shall report to the Division within 30 days any and all replacement activity performed on the elevator(s) pursuant to the requirements of ASME A17.1-2004, Section 8.6.3 involving the suspension means or suspension means fastenings. Further:

1. A separate report for each elevator shall be submitted, in a manner acceptable to the Division, to the following address (or to such other address as the Division might specify in the future): DOSH Elevator Unit, 2 MacArthur Place, Suite 700, Santa Ana, CA 92707, Attn: Engineering Section.
2. Each such report shall contain, but not necessarily be limited to, the following information:
 - a. The State-issued conveyance number, complete address, and OSHSB file number that identifies the permanent variance.
 - b. The business name, complete address, telephone number, and contact person of the elevator responsible party (presumably the Applicant or the subsequent holder of this variance).
 - c. The business name, complete address, telephone number, and Certified Qualified Conveyance Company (CQCC) certification number of the firm performing the replacement work.
 - d. The name (as listed on certification), Certified Competent Conveyance Mechanic (CCCM) certification number, certification expiration date, and signature of each CCCM performing the replacement work.
 - e. The date and time the elevator was removed from normal service for suspension replacement, the date and time the replacement work commenced, the date and time the replacement work was completed, and the date and time the elevator was returned to normal service.
 - f. A detailed description of, and clear color photographs depicting, (1) all the conditions that existed in the suspension components requiring their replacement and (2) any conditions that existed to cause damage or distress to the suspension components being replaced.

Proposed Variance Decision

KONE Monospace 500 Elevators (Group IV)

Hearing Date: March 23, 2022

- g. A detailed list of all elevator components adjusted, repaired, or replaced in conjunction with the suspension component replacement.
 - h. All information provided on the crosshead data plate per ASME A17.1-2004, Section 2.20.2.1, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - i. For the suspension means being replaced, all information provided on the data tag required per ASME A17.1-2004, Section 2.20.2.2, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - j. For the replacement suspension means, all information provided on the data tag required by ASME A17.1-2004, Section 2.20.2.2, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - k. Any other information requested by the Division regarding the replacement of the suspension means or fastenings.
3. In addition to the submission of the report to the Division, the findings of any testing, failure analysis, or other engineering evaluations performed on any portion of the replaced suspension components, or other elevator components replaced in conjunction therewith, shall be submitted to the Division referencing the information contained in above Appendix 2, Section 2, Subsection (a), above.

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application for
Permanent Variance regarding:

Otis Elevators Gen2S (Group IV)

OSHSB File No.: see Section A.1 table of
Proposed Decision Dated: March 24, 2022

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached
PROPOSED DECISION by Autumn Gonzalez, Hearing Officer.

DAVID THOMAS, Chairman

BARBARA BURGEL, Member

KATHLEEN CRAWFORD, Member

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date of Adoption: April 21, 2022

THE FOREGOING VARIANCE DECISION WAS
ADOPTED ON THE DATE INDICATED ABOVE.
IF YOU ARE DISSATISFIED WITH THE
DECISION, A PETITION FOR REHEARING
MAY BE FILED BY ANY PARTY WITH THE
STANDARDS BOARD WITHIN TWENTY (20)
DAYS AFTER SERVICE OF THE DECISION.
YOUR PETITION FOR REHEARING MUST
FULLY COMPLY WITH THE REQUIREMENTS
OF CALIFORNIA CODE OF REGULATIONS,
TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be
posted for the Applicant's employees to
read, and/or a copy thereof must be
provided to the employees' Authorized
Representatives.

BEFORE THE
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
DEPARTMENT OF INDUSTRIAL RELATIONS
STATE OF CALIFORNIA

<p>In the Matter of Application for Permanent Variance Regarding:</p> <p style="text-align: center;">Otis Elevators Gen2S (Group IV)</p>	<p>OSHSB File Nos.: See section A table below</p> <p style="text-align: center;"><u>PROPOSED DECISION</u></p> <p>Hearing Date: March 23, 2022</p>
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A. Subject Matter

- Each below listed applicant (“Applicant”) has applied for permanent variances from provisions of the Elevator Safety Orders, found at title 8 of the California Code of Regulations, with respect to the listed conveyance or conveyances, in the specified quantity, at the specified location:

Variance No.	Applicant Name	Variance Location Address	No. of Elevators
22-V-003	Sharp HealthCare	Sharp Spectrum Parking Structure 8695 Spectrum Center Blvd San Diego, CA	2
22-V-004	US 3223 Wilshire Owner, LLC	3223 Wilshire Blvd. Santa Monica, CA	1
22-V-005	Mercy Housing California 89 L.P.	401 East 6th Street Los Angeles, CA	2
22-V-006	Oakland Civic LLC	11 Lake Merritt Boulevard Oakland, CA	2
22-V-007	Block 7 Retail Investors, LLC	Block 7 B1 Commercial Building 1401 California St Redding, CA	1
22-V-013	Duarte Multifamily, LLC	1700 Fasana Rd. Duarte, CA	3
22-V-025	Healthpeak Properties	4930 Directors Place San Diego, CA	2
22-V-034	Sahar Sepehrnia	621 N Kings Rd West Hollywood, CA	1

*Proposed Variance Decision
Otis Gen2S Elevators (Group IV)
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2. The safety orders from which variance may issue, are enumerated in the portion of the below Decision and Order preceding the variance conditions.

B. Procedural

1. This proceeding is conducted in accordance with Labor Code section 143, and California Code of Regulations, title 8, section 401, et. seq.
2. This hearing was held on March 23, 2022, in Sacramento, California, and via teleconference, by Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Autumn Gonzalez, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with California Code of Regulations, title 8, section 426.
3. At the hearing, Dan Leacox of Leacox & Associates, and Wolter Geesink with Otis Elevator, appeared on behalf of each Applicant; Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”), and Michael Nelmidia appeared on behalf of Board staff, in a technical advisory role apart from the Board.
4. Oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence:

Exhibit Number	Description of Exhibit
PD-1	Permanent variance applications per Section A.1 table
PD-2	OSHSB Notice of Hearing
PD-3	Board Staff Reviews of Variance Application
PD-4	Division Reviews of Variance Application
PD-5	Review Draft-1 Proposed Decision

Official notice is taken of the Board’s rulemaking records, and variance files and decisions, concerning the Elevator Safety Order standards at issue. At close of hearing on March 23, 2022, the record was closed, and the matter taken under submission by the Hearing Officer.

C. Findings and Basis:

Based on the record of this hearing, the Board makes the following findings of fact:

1. Each Applicant intends to utilize Otis Gen2S elevators at the locations and in the numbers stated in the above section A table.

2. The installation contracts for these elevators were or will be signed on or after May 1, 2008, making the elevators subject to the Group IV Elevator Safety Orders.
3. The Board incorporates by reference Items (i.e. sections) D.3 through D.9 of the Proposed Decision adopted by the Board on July 18, 2013 regarding OSHSB File No. 12-V-093 and Item D.4 of the Proposed Decision adopted by the Board on September 25, 2014 in OSHSB File No. 14-V-206.
4. Both Board staff and Division, by way of written submissions to the record (Exhibits PD-3 and PD-4 respectively), and positions stated at hearing, are of the well informed opinion that grant of requested permanent variance, as limited and conditioned per the below Decision and Order will provide employment, places of employment, and subject conveyances, as safe and healthful as would prevail given non-variant conformity with the Elevator Safety Order requirements from which variance has been requested.

D. Conclusive Findings:

The above stated procedural prerequisites, legal authority, and factual findings, as further supported by the documentary record and hearing testimony in this matter, provide a substantive and reasonable basis of conclusion that: (1) Each Applicant has complied with the statutory and regulatory requirements that must be met before an application for permanent variance may be conditionally granted; and (2) a preponderance of the evidence establishes that each Applicants proposal, subject to all conditions and limitations set forth in the below Decision and Order, will provide equivalent safety and health to that which would prevail upon full compliance with the requirements of California Code of Regulation, title 8, Elevator Safety Orders from which variance is being sought.

E. Decision and Order:

Each permanent variance application the subject of this proceeding is conditionally GRANTED as specified below, and to the extent, as of the date the Board adopts this Proposed Decision, each Applicant listed in the above section A table shall have permanent variances from California Code of Regulations, title 8, section 3141 and from the following sections of ASME A17.1-2004 that section 3141 makes applicable to the elevators the subject of those applications:

- Car top railing: sections 2.14.1.7.1 (only to the extent necessary to permit an inset car top railing, if, in fact, the car top railing is inset);
- Speed governor over-speed switch: 2.18.4.2.5(a) (only insofar as is necessary to permit the use of the speed reducing system proposed by the Applicants, where the speed

*Proposed Variance Decision
Otis Gen2S Elevators (Group IV)
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reducing switch resides in the controller algorithms, rather than on the governor, with the necessary speed input supplied by the main encoder signal from the motor);

- Governor rope diameter: 2.18.5.1 (only to the extent necessary to allow the use of reduced diameter governor rope);
- Pitch diameter: 2.18.7.4 (to the extent necessary to use the pitch diameter specified in Condition No. 13.c);
- Suspension means: 2.20.1, 2.20.2.1, 2.20.2.2(a), 2.20.2.2(f), 2.20.3, 2.20.4, 2.20.9.3.4 and 2.20.9.5.4—the variances from these “suspension means” provisions are only to the extent necessary to permit the use of Otis Gen2 flat coated steel suspension belts in lieu of conventional steel suspension ropes;
- Inspection transfer switch: 2.26.1.4.4(a) (only to the extent necessary to allow the inspection transfer switch to reside at a location other than a machine room, if, in fact, it does not reside in the machine room); and
- Seismic reset switch: 8.4.10.1.1(a)(2)(b) (only to the extent necessary to allow the seismic reset switch to reside at a location other than a machine room, if, in fact, it does not reside in the machine room).

These variances apply to the locations and numbers of elevators stated in the section A table (so long as the elevators are Gen2S Group IV devices that are designed, equipped, and installed in accordance with, and are otherwise consistent with, the representations made in the Otis Master File [referred to in previous proposed decisions as the “Gen2 Master File”) maintained by the Board, as that file was constituted at the time of this hearing) and are subject to the following conditions:

1. The suspension system shall comply with the following:
 - a. The coated steel belt and connections shall have factors of safety equal to those permitted for use by section 3141 [ASME A17.1-2004, section 2.20.3] on wire rope suspended elevators.
 - b. Steel coated belts that have been installed and used on another installation shall not be reused.
 - c. The coated steel belt shall be fitted with a monitoring device which has been accepted by the Division and which will automatically stop the car if the residual strength of any single belt drops below 60 percent. If the residual strength of any

- single belt drops below 60 percent, the device shall prevent the elevator from restarting after a normal stop at a landing.
- d. Upon initial inspection, the readings from the monitoring device shall be documented and submitted to the Division.
 - e. A successful test of the monitoring device's functionality shall be conducted at least once a year (the record of the annual test of the monitoring device shall be a maintenance record subject to ASME A17.1-2004, section 8.6.1.4).
 - f. The coated steel belts used shall be accepted by the Division.
2. With respect to each elevator subject to this variance, the applicant shall comply with Division Circular Letter E-10-04, the substance of which is attached hereto as Addendum 1 and incorporated herein by this reference.
 3. The Applicant shall not utilize the elevator unless the manufacturer has written procedures for the installation, maintenance, inspection, and testing of the belts and monitoring device and criteria for belt replacement, and the applicant shall make those procedures and criteria available to the Division upon request.
 4. The flat coated steel belts shall be provided with a metal data tag that is securely attached to one of those belts. This data tag shall bear the following flat steel coated belt data:
 - a. The width and thickness in millimeters or inches;
 - b. The manufacturer's rated breaking strength in (kN) or (lbf);
 - c. The name of the person or organization that installed the flat coated steel belts;
 - d. The month and year the flat coated steel belts were installed;
 - e. The month and year the flat coated steel belts were first shortened;
 - f. The name or trademark of the manufacturer of the flat coated steel belts; and
 - g. Lubrication information.
 5. There shall be a crosshead data plate of the sort required by section 2.20.2.1, and that plate shall bear the following flat steel coated belt data:
 - a. The number of belts;

- b. The belt width and thickness in millimeters or inches; and
 - c. The manufacturer's rated breaking strength per belt in (kN) or (lbf).
6. The opening to the hoistway shall be effectively barricaded when car top inspection, maintenance, servicing, or testing of elevator equipment in the hoistway is required. If service personnel must leave the area for any reason, the hoistway and control room doors shall be closed.
7. If there is an inset car top railing:
- a. Serviceable equipment shall be positioned so that mechanics and inspectors do not have to climb on railings to perform adjustment, maintenance, repairs or inspections. The applicant shall not permit anyone to stand on or climb over the car top railing.
 - b. The distance that the car top railing may be inset shall be limited to no more than 6 inches.
 - c. All exposed areas outside the car top railing shall preclude standing or placing objects or persons which may fall and shall be beveled from the mid- or top rail to the outside of the car top.
 - d. The top of the beveled area and/or car top outside the railing, shall be clearly marked. The markings shall consist of alternating 4 inch diagonal red and white stripes.
 - e. The applicant shall provide durable signs with lettering not less than ½ inch on a contrasting background on each inset railing; each sign shall state:

**CAUTION
DO NOT STAND ON OR CLIMB OVER RAILING**

- f. The Group IV requirements for car top clearances shall be maintained (car top clearances outside the railing shall be measured from the car top and not from the required bevel).
8. If the seismic reset switch does not reside in a machine room, that switch shall not reside in the elevator hoistway. The switch shall reside in the inspection and test control panel located in one upper floor hoistway door jamb or in the control space (outside the hoistway) used by the motion controller.

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9. If the inspection transfer switch required by ASME A17.1, rule 2.26.1.4.4(a) does not reside in a machine room, that switch shall not reside in the elevator hoistway. The switch shall reside in the inspection and test control panel located in one upper floor hoistway door jamb or in the control space (outside the hoistway) used by the motion controller.
10. When the inspection and testing panel is located in the hoistway door jamb, the inspection and test control panel shall be openable only by use of a Security Group I restricted key.
11. The elevator shall be serviced, maintained, adjusted, tested, and inspected only by Certified Competent Conveyance Mechanics who have been trained to, and are competent to, perform those tasks on the Gen2S elevator system in accordance with the written procedures and criteria required by Condition No. 3 and in accordance with the terms of this permanent variance.
12. The governor speed-reducing switch function shall comply with the following:
 - a. It shall be used only with direct drive machines; i.e., no gear reduction is permitted between the drive motor and the suspension means.
 - b. The velocity encoder shall be coupled to the driving machine motor shaft. The "C" channel of the encoder shall be utilized for velocity measurements required by the speed reducing system. The signal from "C" channel of the encoder shall be verified with the "A" and "B" channels for failure. If a failure is detected then an emergency stop shall be initiated.
 - c. Control system parameters utilized in the speed-reducing system shall be held in non-volatile memory.
 - d. It shall be used in conjunction with approved car-mounted speed governors only.
 - e. It shall be used in conjunction with an effective traction monitoring system that detects a loss of traction between the driving sheave and the suspension means. If a loss of traction is detected, then an emergency stop shall be initiated.
 - f. A successful test of the speed-reducing switch system's functionality shall be conducted at least once a year (the record of the annual test of the speed-reducing switch system shall be a maintenance record subject to ASME A17.1-2004, section 8.6.1.4).

- g. A successful test of the traction monitoring system's functionality shall be conducted at least once a year (the record of the annual test of the traction monitoring system shall be a maintenance record subject to ASME A17.1-2004, section 8.6.1.4).
 - h. The Applicant shall not utilize the elevator unless the manufacturer has written procedures for the maintenance, inspection, and testing of the speed-reducing switch and traction monitoring systems. The Applicant shall make the procedures available to the Division upon request.
13. The speed governor rope and sheaves shall comply with the following:
- a. The governor shall be used in conjunction with a 6 mm (0.25 in.) diameter steel governor rope with 6-strand, regular lay construction.
 - b. The governor rope shall have a factor of safety of 8 or greater as related to the strength necessary to activate the safety.
 - c. The governor sheaves shall have a pitch diameter of not less than 180 mm (7.1 in.).
14. Any Certified Qualified Conveyance Company performing inspections, maintenance, servicing, or testing of the elevators shall be provided a copy of this variance decision.
15. The Division shall be notified when the elevator is ready for inspection. The elevator shall be inspected by the Division, and a Permit to Operate shall be issued before the elevator is placed in service.
16. The Applicant shall be subject to the Suspension Means – Replacement Reporting Condition stated in Addendum 2, as hereby incorporated by this reference.
17. The Applicant shall notify its employees or their authorized representative(s), or both, of this order in the same way and to the same extent that employees and authorized representatives are to be notified of docketed permanent variance applications pursuant to California Code of Regulations, title 8, sections 411.2 and 411.3.
18. This Decision and Order shall remain in effect unless modified or revoked upon application by the Applicant, affected employee(s), the Division of Occupational Safety and Health, or by the Board on its own motion, in accordance with procedures per title 8, Division 1, Chapter 3.5.

*Proposed Variance Decision
Otis Gen2S Elevators (Group IV)
Hearing Date: March 23, 2022*

Pursuant to California Code of Regulations, title 8, section 426(b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

Dated: March 24, 2022



Autumn Gonzalez, Hearing Officer

ADDENDUM 1

October 6, 2010

CIRCULAR LETTER E-10-04

TO: Installers, Manufacturers of Conveyances and Related Equipment and, Other Interested Parties

SUBJECT: Coated Steel Belt Monitoring

The Elevator Safety Orders require routine inspection of the suspension means of an elevator to assure its safe operation.

The California Labor Code section 7318 allows the Division to promulgate special safety orders in the absence of regulation.

As it is not possible to see the steel cable suspension means of a Coated Steel Belt, a monitoring device which has been accepted by the Division is required on all Coated Steel Belts which will automatically stop the car if the residual strength of any belt drops below 60%. The Device shall prevent the elevator from restarting after a normal stop at a landing.

The monitoring device must be properly installed and functional. A functioning device may be removed only after a determination has been made that the residual strength of each belt exceeds 60%. These findings and the date of removal are to be conspicuously documented in the elevator machine room. The removed device must be replaced or returned to proper service within 30 days.

If upon routine inspection, the monitoring device is found to be in a non-functional state, the date and findings are to be conspicuously documented in the elevator machine room.

If upon inspection by the Division, the monitoring device is found to be non-functional or removed, and the required documentation is not in place, the elevator will be removed from service.

If the device is removed to facilitate belt replacement, it must be properly installed and functional before the elevator is returned to service.

A successful test of the device's functionality shall be conducted once a year.

This circular does not preempt the Division from adopting regulations in the future, which may address the monitoring of Coated Steel Belts or any other suspension means.

This circular does not create an obligation on the part of the Division to permit new conveyances utilizing Coated Steel Belts.

Debra Tudor
Principal Engineer
DOSH-Elevator Unit HQS

ADDENDUM 2

Suspension Means – Replacement Reporting Condition

Beginning on the date the Board adopts this Proposed Decision and continuing for a period of two years, the Applicant shall report to the Division within 30 days any and all replacement activity performed on the elevator(s) pursuant to the requirements of ASME A17.1-2004, section 8.6.3 involving the suspension means or suspension means fastenings.

Further:

1. A separate report for each elevator shall be submitted, in a manner acceptable to the Division, to the following address (or to such other address as the Division might specify in the future): DOSH Elevator Unit, 2 MacArthur Place, Suite 700, Santa Ana, CA 92707, Attn: Engineering Section.
2. Each such report shall contain, but not necessarily be limited to, the following information:
 - a. The State-issued conveyance number, complete address, and OSHSB file number that identifies the permanent variance.
 - b. The business name, complete address, telephone number, and contact person of the elevator responsible party (presumably the Applicant or the subsequent holder of this variance).
 - c. The business name, complete address, telephone number, and Certified Qualified Conveyance Company (CQCC) certification number of the firm performing the replacement work.
 - d. The name (as listed on certification), Certified Competent Conveyance Mechanic (CCCM) certification number, certification expiration date, and signature of each CCCM performing the replacement work.
 - e. The date and time the elevator was removed from normal service for suspension replacement, the date and time the replacement work commenced, the date and time the replacement work was completed, and the date and time the elevator was returned to normal service.

Proposed Variance Decision
Otis Gen2S Elevators (Group IV)
Hearing Date: March 23, 2022

- f. A detailed description of, and clear color photographs depicting, (1) all the conditions that existed in the suspension components requiring their replacement and (2) any conditions that existed to cause damage or distress to the suspension components being replaced.
 - g. A detailed list of all elevator components adjusted, repaired, or replaced in conjunction with the suspension component replacement.
 - h. All information provided on the crosshead data plate per ASME A17.1-2004, section 2.20.2.1, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - i. For the suspension means being replaced, all information provided on the data tag required per ASME A17.1-2004, section 2.20.2.2, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - j. For the replacement suspension means, all information provided on the data tag required by ASME A17.1-2004, section 2.20.2.2, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - k. Any other information requested by the Division regarding the replacement of the suspension means or fastenings.
3. In addition to the submission of the report to the Division, the findings of any testing, failure analysis, or other engineering evaluations performed on any portion of the replaced suspension components, or other elevator components replaced in conjunction therewith, shall be submitted to the Division referencing the information contained in item 2a above.

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application for
Permanent Variance regarding:

Schindler Model 3300 Elevators with
variant Gov. Ropes & Sheaves (Group IV)

OSHSB File No.: see Section A.1 table of
Proposed Decision Dated: March 24, 2022

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached
PROPOSED DECISION by Autumn Gonzalez, Hearing Officer.

DAVID THOMAS, Chairman

BARBARA BURGEL, Member

KATHLEEN CRAWFORD, Member

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date of Adoption: April 21, 2022

THE FOREGOING VARIANCE DECISION WAS
ADOPTED ON THE DATE INDICATED ABOVE.
IF YOU ARE DISSATISFIED WITH THE
DECISION, A PETITION FOR REHEARING
MAY BE FILED BY ANY PARTY WITH THE
STANDARDS BOARD WITHIN TWENTY (20)
DAYS AFTER SERVICE OF THE DECISION.
YOUR PETITION FOR REHEARING MUST
FULLY COMPLY WITH THE REQUIREMENTS
OF CALIFORNIA CODE OF REGULATIONS,
TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be
posted for the Applicant's employees to
read, and/or a copy thereof must be
provided to the employees' Authorized
Representatives.

BEFORE THE
 OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
 DEPARTMENT OF INDUSTRIAL RELATIONS
 STATE OF CALIFORNIA

<p>In the Matter of Application for Permanent Variance Regarding:</p> <p style="text-align: center;">Schindler Model 3300 Elevators with variant Gov. Ropes & Sheaves (Group IV)</p>	<p>OSHSB File Nos.: See section A.1 table below</p> <p style="text-align: center;"><u>PROPOSED DECISION</u></p> <p>Hearing Date: March 23, 2022</p>
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A. Subject Matter and Jurisdiction:

- Each below listed applicant (“Applicant”) has applied for permanent variance from certain provisions of the Elevator Safety Orders, found at title 8, of the California Code of Regulations, with respect to a conveyance, or conveyances, in the listed quantity, at the listed location:

Variance No.	Applicant Name	Variance Location Address	No. of Elevators
22-V-008	City of San Diego	4940 Eastgate Mall O&M Building San Diego, CA	1
22-V-009	City of San Diego	4940 Eastgate Mall Processing Building San Diego, CA	1
22-V-015	Fountain Owner, LLC	6344 Fountain Ave. Los Angeles, CA	2

- This proceeding is conducted in accordance with Labor Code section 143, and California Code of Regulations, title 8, section 401, et. seq.
- The safety orders at issue are set out in below section C.1—C.4.

B. Process and Procedure:

- This hearing was held on March 23, 2022, in Sacramento, California, via teleconference, by Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Autumn Gonzalez, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with California Code of Regulations, title 8, section 426.

Proposed Variance Decision

Schindler Model 3300 Elevators w/variant Gov. Rope & Sheaves

Hearing Date: March 23, 2022

2. At the hearing, Jennifer Linares, with the Schindler Elevator Corporation, appeared on behalf of each Applicant; Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”); and Michael Nelmda appeared on behalf of Board staff, in a technical advisory role apart from the Board.
3. Oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence:

Exhibit Number	Description of Exhibit
PD-1	Permanent variance applications per section A.1 table
PD-2	OSHSB Notice of Hearing
PD-3	Board Staff Reviews of Variance Application
PD-4	Division Reviews of Variance Application
PD-5	Review Draft-1 Proposed Decision

Official notice is taken of the Board’s rulemaking records, and variance decisions concerning the safety order requirements from which variance is requested. At close of hearing on March 23, 2022, the record was closed, and the matter taken under submission by the Hearing Officer.

- C. Findings of Fact—Based upon the record of this proceeding, the Board finds the following:

Requested Suspension Means Related Variance:

1. As each pertains to the non-circular elastomeric coated suspension means characteristic of the Schindler Model 3300 elevator, each Applicant presently seeks permanent variance from the following title 8, Elevator Safety Order incorporated ASME Safety Code for Elevators and Escalators (ASME Code) A17.1-2004, sections and subsections:

- section 2.20.1—Wire rope suspension means
- section 2.20.2.1—Crosshead data plate
- Subsection 2.20.2.2(a)—Wire rope data tag
- Subsection 2.20.2.2(f)—ID of steel wire rope as preformed or nonpreformed
- section 2.20.3—Wire rope safety factor
- section 2.20.4—Number and diameter of wire ropes
- section 2.20.9.3.4—Wire rope end connections
- section 2.20.9.5.4—Wire rope sockets

Proposed Variance Decision

Schindler Model 3300 Elevators w/variant Gov. Rope & Sheaves

Hearing Date: March 23, 2022

Requested Car Top Railing Inset Variance:

2. As it pertains to top of car railing placement requiring space occupied by upper hoistway mounted elevator machinery characteristic of the Schindler Model 3300 elevator, each Applicant presently seeks permanent variance from the following title 8, Elevator Safety Order incorporated ASME Code A17.1-2004, section:

section 2.14.1.7.1—Top of Car Perimeter Railing Placement

Requested Seismic Reset Switch Placement Variance:

3. As it pertains to installation of the requisite seismic reset switch within a “machine room” location incompatible with machine-room-less design of the Schindler Model 3300 elevator, each Applicant presently seeks permanent variance from the following title 8, Elevator Safety Order incorporated ASME Code subsection:

Subsection 8.4.10.1.1(a)(2)(b)--Seismic Reset Switch Placement in Machine Room

Requested Transfer Switch Placement Variance:

4. As it pertains to installation of the requisite transfer switch within a “machine room” location incompatible with machine-room-less design of the Schindler Model 3300 elevator, each Applicant presently seeks permanent variance from the following title 8, Elevator Safety Order incorporated ASME Code A17.1-2004, subsection:

Subsection 2.26.1.4.4(a)--Transfer Switch Placement in Machine Room

Requested Governor Sheave to Rope Diameter Ratio Variance:

5. As it pertains to installation of requisite pitch diameter of the governor sheaves and governor tension sheaves, each Applicant presently seeks permanent variance from the following title 8, Elevator Safety Order incorporated ASME Code A17.1-2004, subsection:

section 3141 [ASME A17.1-2004, section 2.18.7.4] states:

“The pitch diameter of governor sheaves and governor tension sheaves shall be not less than the product of the diameter of the rope and the applicable multiplier listed in Table 2.18.7.4, based on the rated speed and the number of strands in the rope.”

Proposed Variance Decision

Schindler Model 3300 Elevators w/variant Gov. Rope & Sheaves

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Table 2.18.7.4 Multiplier for Determining Governor Sheave Pitch Diameter

Rated Speed, m/s (ft/min)	Number of Strands	Multiplier
1.00 or less (200 or less)	6	42
1.00 or less (200 or less)	8	30
Over 1.00 (over 200)	6	46
Over 1.00 (over 200)	8	32

50 mm (2 in.) when tested in accordance with ASTM E 8. Forged, cast, or welded parts shall be stress relieved. Cast iron shall have a factor of safety of not less than 10.

6. Per the Application, the proposal is stated as follows: “The approved speed governor provided for this elevator has a sheave diameter-to-governor rope diameter ratio [D/d] of 33. This is not compliant with the current Group IV Elevator Safety Orders which require a [D/d] of 42-46. Equivalent safety will be attained by providing a governor rope with a breaking strength that provides a factor of safety greater than that required by the Elevator Safety Orders, and a governor sheave diameter which complies with the requirements of ASME A17.1-2010, section 2.18.5.1, and section 2.18.7.4, which, under certain conditions, permits the use of a governor rope and governor sheave ratio [D/d] of not less than 30.”
7. Having analyzed the request, as reflected in its Review of Application (Exhibit PD-4) Division is of the well informed professional opinion that the proposal, in as much as it is to use a governor with sheave pitch diameter of not less than the product of the governor rope diameter and a multiplier of 30, in conjunction with a steel governor rope with a diameter of 6 mm (0.25 in.), 6-strand construction, and a factor of safety of 8 or greater, will provide safety, and workplace safety and health equivalent or superior to that of the ASME A17.1-2004, section 2.18.7.4. Division also correctly notes Applicant’s proposed governor sheave pitch diameter, and reduced diameter governor rope installation is similar to installations for which a permanent variance has been previously conditionally granted. (e.g. OSHSB File No. 19-V-076)

Official Notice and Incorporation by Reference—OSHSB File No. 15-V-349:

8. Per hereby entered stipulation offered at hearing by Applicant, Division, and Board staff, concerning preexisting Board records, including decisions in matters of permanent variance from Elevator Safety Order requirements, the Board takes Official Notice and expressly incorporates herein by reference, OSHSB File No. 15-V-349, Decision and Order adopted November 17, 2016, section D.1—D.75 findings, and therein entered record upon which it was based.

Proposed Variance Decision

Schindler Model 3300 Elevators w/variant Gov. Rope & Sheaves

Hearing Date: March 23, 2022

Positions of Division, and Board Staff:

9. Having fully reviewed each Applicant's request for variance from the above identified Elevator Safety Order requirements, it is the concurrent opinion of Division and Board staff, that conditionally limited grant to each Applicant of permanent variance as specified per the below Decision and Order, will provide for elevator safety, and occupational safety and health, equivalent or superior to that of the Elevator Safety Order requirements from which variance is being sought. The present opinion of Division and Board staff, to any extent it may vary from those previously held with respect to the previously heard matter in OSHSB File No. 15-V-349, reflects further scrutiny of the subject matter, consultation between Division, Board staff, Applicant representatives, and refinement of recommended conditions and limitations.

D. Conclusive Findings:

The above stated procedural prerequisites, legal authority, and factual findings, as further supported by the documentary record and hearing testimony in this matter, provide a substantive and reasonable basis of conclusion that: (1) Each Applicant has complied with the statutory and regulatory requirements that must be met before an application for permanent variance may be conditionally granted, and (2) a preponderance of the evidence establishes that each Applicant's proposal, subject to all conditions and limitations set forth in the below Decision and Order, will provide equivalent safety and health to that which would prevail upon full compliance with the requirements of California Code of Regulation, title 8, Elevator Safety Orders from which variance is being sought.

E. Decision and Order:

Each section A table identified Applicant is hereby conditionally GRANTED Permanent Variance as specified below, and to the limited extent, as of the date the Board adopts this Proposed Decision, with respect to the section A specified number of Schindler Model 3300 elevator(s), at the specified location, each shall conditionally hold permanent variance from the following subparts of ASME A17.1-2004, currently incorporated by reference into California Code of Regulations, title 8, section 3141.

Suspension Members: Each Applicant shall conditionally hold permanent variance from the following title 8, section 3141, incorporated sections and subsections of ASME A17.12004, to the limited extent variance is necessary to provide for use of noncircular elastomeric-coated steel suspension members and concomitant components, and configurations— section 2.20.1; section 2.20.2.1; Subsection 2.20.2.2(a); Subsection 2.20.2.2(f); section 2.20.3; section 2.20.4: section 2.20.9.3.4; and section 2.20.9.5.4.

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Inspection Transfer Switch: Each Applicant shall conditionally hold permanent variance from certain requirements of the following title 8, section 3141 incorporated section of ASME A17.1-2004, to the extent variance is necessary to having the requisite inspection transfer switch located elsewhere than a machine room, within a Security Group I enclosure built into an upper floor landing door jam, or within other readily accessible and secure space shared with the motion controller outside the hoistway: section 2.26.1.4.4.

Seismic Safety Switch Placement: Each Applicant shall conditionally hold permanent variance from certain requirements of the following title 8, section 3141, incorporated section of ASME A17.1-2004, to the limited extent variance is necessary to having the requisite seismic reset switch located elsewhere than a machine room, within a Security Group I enclosure built into an upper floor landing door jam, or within other readily accessible and secure space shared with the motion controller outside the hoistway: section 8.4.10.1.1.

Car Top Railing: Each Applicant shall conditionally hold permanent variance from certain requirements of the following title 8, section 3141, incorporated section of ASME A17.1-2004, to the limited extent variance is necessary to provide for the below specified inseting of the subject elevator's top of car railing: section 2.14.1.7.1.

Governor Rope and Sheave: Each Applicant shall conditionally hold permanent variance from certain requirements of the following title 8, section 3141, incorporated section of ASME A17.1-2004, to the limited extent variance is necessary to allow for the below specified governor rope and governor sheave parameters: section 2.18.7.4.

Further Conditions and Limitations:

1. The elevator suspension system shall comply to the following:
 - 1.1. The suspension traction media (STM) members and their associated fastenings shall conform to the applicable requirements of ASME A17.1-2013, sections:
 - 2.20.4.3 – Minimum Number of Suspension Members
 - 2.20.3 – Factor of Safety
 - 2.20.9 – Suspension Member Fastening
 - 1.1.1 Additionally, STMs shall meet or exceed all requirements of ASME 17.6-2010, Standard for Elevator Suspension, Compensation, and Governor Systems, Part 3 Noncircular Elastomeric Coated Steel Suspension Members for Elevators.

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Schindler Model 3300 Elevators w/variant Gov. Rope & Sheaves

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- 1.2. The Applicant shall not utilize the elevator unless the manufacturer has written procedures for the installation, maintenance, inspection and testing of the STM members and fastenings and related monitoring and detection systems and criteria for STM replacement, and the Applicant shall make those procedures and criteria available to the Certified Competent Conveyance Mechanic (CCCM) at the location of the elevator, and to the Division of Occupational Safety and Health (Division) upon request.
- 1.3. STM member mandatory replacement criteria shall include:
 - 1.3.1 Any exposed wire, strand or cord;
 - 1.3.2 Any wire, strand or cord breaks through the elastomeric coating;
 - 1.3.3 Any evidence of rouging (steel tension element corrosion) on any part of the elastomeric coated steel suspension member;
 - 1.3.4 Any deformation in the elastomeric suspension member such as, but not limited to, kinks or bends.
- 1.4. Traction drive sheaves must have a minimum diameter of 72 mm. The maximum speed of STM members running on 72 mm, 87 mm and 125 mm drive sheaves shall be no greater than 2.5 m/s, 6.0 m/s and 8.0 m/s respectively.
- 1.5. If any one STM member needs replacement, the complete set of suspension members on the elevator shall be replaced. Exception: If a new suspension member is damaged during installation, and prior to any contemporaneously installed STM having been placed into service, it is permissible to replace the individual damaged suspension member. STM members that have been installed on another installation shall not be re-used.
- 1.6. A traction loss detection means shall be provided that conforms to the requirements of ASME A17.1-2013, section 2.20.8.1. The means shall be tested for correct function annually in accordance with ASME A17.1-2013, section 8.6.4.19.12.
- 1.7. A broken suspension member detection means shall be provided that conforms to the requirements of ASME A17.1-2013, section 2.20.8.2. The means shall be tested for correct function annually in accordance with ASME A17.1-2013, section 8.6.4.19.13(a).
- 1.8. An elevator controller integrated bend cycle monitoring system shall monitor actual STM bend cycles, by means of continuously counting, and storing in

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Schindler Model 3300 Elevators w/variant Gov. Rope & Sheaves

Hearing Date: March 23, 2022

nonvolatile memory, the number of trips that the STM makes traveling, and thereby being bent, over the elevator sheaves. The bend cycle limit monitoring means shall automatically stop the car normally at the next available landing before the bend cycle correlated residual strength of any single STM member drops below 80 percent of full rated strength. The monitoring means shall prevent the car from restarting. Notwithstanding any less frequent periodic testing requirement per Addendum 1 (Division Circular Letter), the bend cycle monitoring system shall be tested semi-annually in accordance with the procedures required per above Conditions 1.2, and 1.3.

- 1.9. Each elevator shall be provided with a device that electronically detects a reduction in residual strength of each STM member. The device shall be in compliance with Division Circular Letter E-10-04, a copy of which is attached hereto as Addendum 1, and incorporated herein by reference.
 - 1.10. The elevator crosshead data plate shall comply with the requirements of ASME A17.1-2013, section 2.20.2.1.
 - 1.11. A suspension means data tag shall be provided that complies with the requirements of ASME A17.1-2013, section 2.20.2.2.
 - 1.12. Comprehensive visual inspections of the entire length of each and all installed suspension members, in conformity with above Conditions 1.2 and 1.3 specified criteria, shall be conducted and documented every six months by a CCCM.
 - 1.13. The Applicant shall be subject to the requirements per hereto attached, and inhere incorporated, Addendum 2, "Suspension Means Replacement Reporting Condition."
 - 1.14. Records of all tests and inspections shall be maintenance records subject to ASME A17.1-2004, sections 8.6.1.2, and 8.6.1.4, respectively.
2. Inspection Transfer switch and Seismic Reset switch placement and enclosure shall comply with the following:
 - 2.1. If the inspection transfer switch required by ASME A17.1-2004, Rule 2.26.1.4.4, does not reside in a machine room, that switch shall not reside in the elevator hoistway. The switch shall reside in the control/machinery room/space containing the elevator's control equipment in an enclosure secured by a lock openable by a Group 1 security key. The enclosure is to remain locked at all times when not in use.

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- 2.2. If the seismic reset switch does not reside in the machine room, that switch shall not reside in the elevator hoistway. The switch shall reside in the control/machinery room/space containing the elevator's control equipment in an enclosure secured by a lock openable by a Group 1 security key. The enclosure is to remain locked at all times when not in use.
3. Any and all inset car top railing shall comply with the following:
 - 3.1. Serviceable equipment shall be positioned so that mechanics and inspectors do not have to stand on or climb over the railings to perform adjustments, maintenance, repairs or inspections. The Applicant shall not permit anyone to stand or climb over the car top railing.
 - 3.2. The distance that the railing can be inset shall be limited to not more than 6 inches.
 - 3.3. All exposed areas of the car top outside the car top railing where the distance from the railing to the edge of the car top exceeds 2 inches, shall be beveled with metal, at an angle of not less than 75 degrees with the horizontal, from the mid or top rail to the outside of the car top, such that no person or object can stand, sit, kneel, rest, or be placed in the exposed areas.
 - 3.4. The top surface of the beveled area and/or car top outside the railing, shall be clearly marked. The markings shall consist of alternating 4 inch diagonal red and white stripes.
 - 3.5. The applicant shall provide durable signs with lettering not less than 1/2 inch on a contrasting background on each inset railing; each sign shall state:

CAUTION
STAY INSIDE RAILING
NO LEANING BEYOND RAILING
NO STEPPING ON, OR BEYOND, RAILING
 - 3.6. The Group IV requirements for car top clearances shall be maintained (car top clearances outside the railing will be measured from the car top and not from the required bevel).
4. The elevator shall be serviced, maintained, adjusted, tested, and inspected only by CCCM having been trained, and competent, to perform those tasks on the Schindler Model 3300 elevator system in accordance with written procedures and criteria, including as required per above Conditions 1.2, and 1.3.

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5. The speed governor rope and sheaves shall comply with the following:
 - 5.1. The governor shall be used in conjunction with a steel 6 mm (0.25 in.) diameter governor rope with 6-strand, regular lay construction.
 - 5.2. The governor rope shall have a factor of safety of 8 or greater as related to the strength necessary to activate the safety.
 - 5.3. The governor sheaves shall have a pitch diameter of not less than 200 mm (7.87 in.).
6. The Division shall be notified when the elevator is ready for inspection. The elevator shall be inspected by the Division, and all applicable requirements met, including conditions of this permanent variance, prior to a Permit to Operate the elevator being issued. The elevator shall not be placed in service prior to the Permit to Operate being issued by Division.
7. The Applicant shall notify its employees or their authorized representative(s), or both, of this order in the same way and to the same extent that employees and authorized representatives are to be notified of docketed permanent variance applications pursuant to California Code of Regulations, title 8, sections 411.2, and 411.3.
8. This Decision and Order shall remain in effect unless modified or revoked upon application by the Applicant, affected employee(s), the Division, or by the Board on its own motion, in procedural accordance with title 8, sections 411, et. seq.

Pursuant to California Code of Regulations, title 8, section 426(b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

Dated: March 24, 2022



Autumn Gonzalez, Hearing Officer

ADDENDUM 1

October 6, 2010

CIRCULAR LETTER E-10-04

TO: Installers, Manufacturers of Conveyances and Related Equipment and, Other Interested Parties

SUBJECT: Coated Steel Belt Monitoring

The Elevator Safety Orders require routine inspection of the suspension means of an elevator to assure its safe operation.

The California Labor Code section 7318 allows the Division to promulgate special safety orders in the absence of regulation.

As it is not possible to see the steel cable suspension means of a Coated Steel Belt, a monitoring device which has been accepted by the Division is required on all Coated Steel Belts which will automatically stop the car if the residual strength of any belt drops below 60%. The Device shall prevent the elevator from restarting after a normal stop at a landing.

The monitoring device must be properly installed and functional. A functioning device may be removed only after a determination has been made that the residual strength of each belt exceeds 60%. These findings and the date of removal are to be conspicuously documented in the elevator machine room. The removed device must be replaced or returned to proper service within 30 days.

If upon routine inspection, the monitoring device is found to be in a non-functional state, the date and findings are to be conspicuously documented in the elevator machine room.

If upon inspection by the Division, the monitoring device is found to be non-functional or removed, and the required documentation is not in place, the elevator will be removed from service.

If the device is removed to facilitate belt replacement, it must be properly installed and functional before the elevator is returned to service.

A successful test of the device's functionality shall be conducted once a year.

This circular does not preempt the Division from adopting regulations in the future, which may address the monitoring of Coated Steel Belts or any other suspension means.

This circular does not create an obligation on the part of the Division to permit new conveyances utilizing Coated Steel Belts.

Debra Tudor
Principal Engineer
DOSH-Elevator Unit HQS

ADDENDUM 2

Suspension Means – Replacement Reporting Condition

Beginning on the date the Board adopts this Proposed Decision and continuing for a period of two years, the Applicant shall report to the Division within 30 days any and all replacement activity performed on the elevator(s) pursuant to the requirements of ASME A17.1-2004, section 8.6.3 involving the suspension means or suspension means fastenings.

Further:

1. A separate report for each elevator shall be submitted, in a manner acceptable to the Division, to the following address (or to such other address as the Division might specify in the future): DOSH Elevator Unit, 2 MacArthur Place, Suite 700, Santa Ana, CA 92707, Attn: Engineering section.
2. Each such report shall contain, but not necessarily be limited to, the following information:
 - a. The State-issued conveyance number, complete address, and OSHSB file number that identifies the permanent variance.
 - b. The business name, complete address, telephone number, and contact person of the elevator responsible party (presumably the Applicant or the subsequent holder of this variance).
 - c. The business name, complete address, telephone number, and Certified Qualified Conveyance Company (CQCC) certification number of the firm performing the replacement work.
 - d. The name (as listed on certification), Certified Competent Conveyance Mechanic (CCCM) certification number, certification expiration date, and signature of each CCCM performing the replacement work.
 - e. The date and time the elevator was removed from normal service for suspension replacement, the date and time the replacement work commenced, the date and time the replacement work was completed, and the date and time the elevator was returned to normal service.
 - f. A detailed description of, and clear color photographs depicting, (1) all the conditions that existed in the suspension components requiring their replacement

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Hearing Date: March 23, 2022

- and (2) any conditions that existed to cause damage or distress to the suspension components being replaced.
- g. A detailed list of all elevator components adjusted, repaired, or replaced in conjunction with the suspension component replacement.
 - h. All information provided on the crosshead data plate per ASME A17.1-2004, section 2.20.2.1, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - i. For the suspension means being replaced, all information provided on the data tag required per ASME A17.1-2004, section 2.20.2.2, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - j. For the replacement suspension means, all information provided on the data tag required by ASME A17.1-2004, section 2.20.2.2, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - k. Any other information requested by the Division regarding the replacement of the suspension means or fastenings.
3. In addition to the submission of the report to the Division, the findings of any testing, failure analysis, or other engineering evaluations performed on any portion of the replaced suspension components, or other elevator components replaced in conjunction therewith, shall be submitted to the Division referencing the information contained in item 2a above.

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application for
Permanent Variance by:

San Diego Unified School District

OSHSB File No.: 22-V-011
Proposed Decision Dated: March 24, 2022

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached
PROPOSED DECISION by Autumn Gonzalez, Hearing Officer.

DAVID THOMAS, Chairman

BARBARA BURGEL, Member

KATHLEEN CRAWFORD, Member

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date of Adoption: April 21, 2022

THE FOREGOING VARIANCE DECISION WAS
ADOPTED ON THE DATE INDICATED ABOVE.
IF YOU ARE DISSATISFIED WITH THE
DECISION, A PETITION FOR REHEARING
MAY BE FILED BY ANY PARTY WITH THE
STANDARDS BOARD WITHIN TWENTY (20)
DAYS AFTER SERVICE OF THE DECISION.
YOUR PETITION FOR REHEARING MUST
FULLY COMPLY WITH THE REQUIREMENTS
OF CALIFORNIA CODE OF REGULATIONS,
TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be
posted for the Applicant's employees to
read, and/or a copy thereof must be
provided to the employees' Authorized
Representatives.

BEFORE THE
 OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
 DEPARTMENT OF INDUSTRIAL RELATIONS
 STATE OF CALIFORNIA

<p>In the Matter of Application for Permanent Variance by:</p> <p style="text-align: center;">San Diego Unified School District</p>	<p>OSHSB File No.: 22-V-011</p> <p>PROPOSED DECISION</p> <p>Hearing Date: March 23, 2022</p>
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A. Procedural Matters:

- San Diego Unified School District (“Applicant”) has applied for a permanent variance from provisions of title 8 of the California Code of Regulations regarding vertical platform (wheelchair) lifts, with respect to one vertical platform (wheelchair) lift proposed to be located at:

LMEC - Logan Memorial Educational Campus - K9-12
 2875 Ocean View Blvd.
 San Diego, CA

- The safety orders at issue are stated in the prefatory part of the Decision and Order. This proceeding is conducted in accordance with Labor Code section 143, and California Code of Regulations, title 8, section 401, et. seq.
- This hearing was held on March 23, 2022, in Sacramento, California, via teleconference, by delegation of the Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Autumn Gonzalez, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with California Code of Regulations, title 8, section 426.
- At the hearing, Raymond Zuniga with Arrow Lift of California, appeared on behalf of the Applicant, Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”), and Michael Nelmidia appeared on behalf of Board staff acting in a technical advisory role apart from the Board.
- At the hearing, oral evidence was received and by stipulation of all parties, documents were accepted into evidence:

Exhibit Number	Description of Exhibit
PD-1	Permanent variance application per section A.1 table
PD-2	OSHSB Notice of Hearing
PD-3	Board Staff Review of Variance Application
PD-4	Division Review of Variance Application
PD-5	Review Draft-1 Proposed Decision

Official is notice taken of the Board’s rulemaking records and variance decision concerning the Elevator Safety Order requirements at issue. On March 23, 2022, at close of hearing, the record closed and the matter was taken under submission on behalf of the Board.

B. Findings of Fact

Based on the record of this proceeding, and officially noticed Board records per (above section A.5) stipulation of Applicant and Division—inclusive of below cited permanent variance file decisions—the Board finds the following:

1. The Applicant proposes to install one (1) vertical platform (wheelchair) lift at a location having the address of:

LMEC - Logan Memorial Educational Campus - K9-12
2875 Ocean View Blvd.
San Diego, CA

2. The subject vertical lift is proposed to be a Symmetry Model VPC ELH-168, with a vertical travel range of approximately 168 inches. That range of travel exceeds the 12 foot maximum vertical rise allowed by ASME A18.1-2003, section 2.7.1—the State of California standard in force at the time of this Decision.
3. The Division’s evaluation in this Matter, states that the more recent consensus code ASME A18.1-2005 allows for vertical platform lifts to have a travel not exceeding 14 feet (168 in.).
4. Permanent variances regarding the extended travel of vertical platform lifts, of similar configuration to that of the subject proposed model, have been previously granted, absent subsequent harm attributable to such variance being reported by Division. (E.g. OSHSB File Nos. 13-V-260, 15-V-097, 17-V-270, 18-V-278, 19-V-256).
5. With respect to the equivalence or superior of safety, conditions and limitations of the Decision and Order are in material conformity with findings and conditions of prior Board permanent variance decisions, including the above cited.
6. Per its written Review of Application for Permanent Variance, Exhibit PD-4, it is the informed opinion of Division that equivalent safety (at minimum) will be achieved upon grant of presently requested permanent variance, subject to conditions and limitations incorporated into the below Decision and Order. Per its written review memorandum (Exhibit PD-3), Board staff concurs with Division in recommending that such conditional grant will provide for safety equivalence.

C. Conclusive Findings

On the basis of the above procedural matters, legal authority, and findings of fact, the Board finds that Applicant has complied with the statutory and regulatory requirements that must be met before an application for a permanent variance may be granted and that a preponderance of the evidence establishes that the Applicant's proposal, subject to all limiting conditions set forth in the below Decision and Order, will provide for conveyance safety, and employment and a place of employment that are as safe and healthful, as those that would prevail if the Applicant complied with the safety orders at issue.

D. Decision and Order

The Application for Permanent Variance of San Diego Unified School District, OSHSB File No. 22-V-011, is conditionally GRANTED to the limited extent, upon the Board's adoption of this Proposed Decision, San Diego Unified School District, shall have permanent variance from California Code of Regulations, title 8, sections 3142(a) and 3142.1 incorporated ASME A18.1-2003, section 2.7.1, inasmuch as it restricts the vertical rise of a wheelchair lift to a maximum of 12 feet, with respect to one (1) Symmetry Model VPC ELH-168 Vertical Platform Lift, to be located at:

LMEC - Logan Memorial Educational Campus - K9-12
2875 Ocean View Blvd.
San Diego, CA

The above referenced vertical platform lift shall be subject to the following further conditions and limitations:

1. This lift may travel up to 168 inches, unless the manufacturer's instructions provide for a lesser vertical travel limit, or lesser total elevation change, in which case, travel shall be limited to the lesser limit or elevation change.
2. The wheelchair lift shall be installed and operated in accordance with the manufacturer's instructions, unless the provisions of this variance or applicable provisions of the law provide otherwise.
3. Durable signs with lettering not less than 5/16 inch on a contrasting background shall be permanently and conspicuously posted inside the car and at all landings indicating that the lift is for the exclusive use of persons with physical impairments and that the lift is not to be used to transport material or equipment. The use of the lift shall be limited in accordance with these signs.
4. A maintenance contract shall be executed between the owner/operator and a Certified Qualified Conveyance Company (CQCC). The contract shall stipulate that the routine

preventive maintenance required by section 3094.5(a)(1) shall be performed at least quarterly and shall include but not be limited to:

- (a) Platform driving means examination;
- (b) Platform examination;
- (c) Suspension means examination;
- (d) Platform alignment;
- (e) Vibration examination;
- (f) Door/gate electrical; and
- (g) Mechanical lock examination.

5. The lift shall be tested annually for proper operation under rated load conditions. The Division's Elevator Unit District Office shall be provided written notification in advance of the test, and the test shall include a check of car or platform safety device.
6. The lift shall be shut down immediately if the lift experiences unusual noise and vibration, and the Applicant shall notify the CQCC immediately. The lift shall only be restarted by the CQCC.
7. The Applicant shall notify the CQCC if the lift shuts down for any reason. The lift shall only be restarted by the CQCC.
8. Service logs including, but not limited to, the device shutdown(s) shall be kept in the maintenance office and shall be available to the Division. The shutdown information shall contain the date of the shutdown, cause of the shutdown, and the action taken to correct the shutdown.
9. The Applicant shall provide training on the safe operation of the lift in accordance with section 3203. Such training shall be conducted annually for all employees using or who will be assisting others in using the lift. The Applicant shall notify the Division in writing that training has been conducted. A copy of the training manual (used for the subject training), and documentation identifying the trainer and attendees shall be maintained for at least 1 year and provided to the Division upon request.
10. Any CQCC performing inspections, maintenance, servicing or testing of the elevators shall be provided a copy of this variance decision.

11. The Division shall be notified when the lift is ready for inspection, and the lift shall be inspected by the Division and a Permit to Operate shall be issued before the lift is put into service.
12. The Applicant shall notify its employees or their authorized representative(s), or both, of this order in the same way and to the same extent that employees and authorized representatives are to be notified of docketed permanent variance applications pursuant to California Code of Regulations, title 8, sections 411.2 and 411.3.
13. This Decision and Order shall remain in effect unless modified or revoked upon application by the Applicant, affected employee(s), the Division, or by the Board on its own motion, in accordance with title 8, Division 1, Chapter 3.5, rules and procedures.

Pursuant to California Code of Regulations, title 8, section 426(b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

Dated: March 24, 2022



Autumn Gonzalez, Hearing Officer

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application for
Permanent Variance regarding:

KONE Monospace 500 Elevators
with Retractable Platform Guard (Group IV)

OSHSB File No.: See Section A.1 Table of
Proposed Decision Dated: March 24, 2022

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached
PROPOSED DECISION by Autumn Gonzalez, Hearing Officer.

DAVID THOMAS, Chairman

BARBARA BURGEL, Member

KATHLEEN CRAWFORD, Member

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date of Adoption: April 21, 2022

THE FOREGOING VARIANCE DECISION WAS
ADOPTED ON THE DATE INDICATED ABOVE.
IF YOU ARE DISSATISFIED WITH THE
DECISION, A PETITION FOR REHEARING
MAY BE FILED BY ANY PARTY WITH THE
STANDARDS BOARD WITHIN TWENTY (20)
DAYS AFTER SERVICE OF THE DECISION.
YOUR PETITION FOR REHEARING MUST
FULLY COMPLY WITH THE REQUIREMENTS
OF CALIFORNIA CODE OF REGULATIONS,
TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be
posted for the Applicant's employees to
read, and/or a copy thereof must be
provided to the employees' Authorized
Representatives.

BEFORE THE
 OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
 DEPARTMENT OF INDUSTRIAL RELATIONS
 STATE OF CALIFORNIA

<p>In the Matter of Application for Permanent Variance Regarding:</p> <p>KONE Monospace 500 Elevators with Retractable Platform Guard (Group IV)</p>	<p>OSHSB File Nos.: See Section A.1 Table Below</p> <p><u>PROPOSED DECISION</u></p> <p>Hearing Date: March 23, 2022</p>
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A. Subject Matter:

- Each below listed applicant (“Applicant”) applied for a permanent variance from provisions of the Elevator Safety Orders, found at Title 8 of the California Code of Regulations, with respect to a conveyance, or conveyances, in the listed quantity, at the listed location:

Variance No.	Applicant Name	Variance Location Address	No. of Elevators
22-V-012	Kohl's	5010 Northgate Drive San Rafael, CA	1

- The subject Title 8, safety order requirements are set out within California Code of Regulations, Title 8, Section 3141 incorporated ASME A17.1-2004, Sections 2.18.5.1, 2.20.4, 2.4.1.5 and 2.15.9.2.

B. Procedural:

- This hearing was held on March 23, 2022, in Sacramento, California, via teleconference, by delegation of the Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Autumn Gonzalez, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with California Code of Regulations, Title 8, Section 426.
- At the hearing, Manish Sablok, with KONE, Inc., appeared on behalf of each Applicant; Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”), and Michael Nelmida appeared on behalf of Board staff in a technical advisory capacity apart from the Board.

Proposed Variance Decision

KONE Monospace 500 Elevators with Retractable Platform Guard (Group IV)

Hearing Date: March 23, 2022

3. Documentary and oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence:

Exhibit Number	Description of Exhibit
PD-1	Application(s) for Permanent Variance per section A.1 table
PD-2	OSHSB Notice of Hearing
PD-3	Board Staff Review of Variance Application
PD-4	Division Review of Variance Application
PD-5	Review Draft-1 Proposed Decision

Official notice is taken of the Board’s files, records, recordings and decisions concerning the Elevator Safety Order requirements from which variance shall issue. On March 23, 2022, the hearing and record closed, and the matter was taken under submission by the Hearing Officer.

C. Findings of Fact—Based on the record of this proceeding, the Board finds the following:

1. Each respective Applicant intends to utilize the KONE Inc. Monospace 500 type elevator, in the quantity, at the location, specified per the above Section A.1 table.
2. The installation contract for this elevator was or will be signed on or after May 1, 2008, thus making the elevator subject to the Group IV Elevator Safety Orders.
3. Each Applicant proposes to use hoisting ropes that are 8 mm in diameter which also consist of 0.51 mm diameter outer wires, in variance from the express requirements of ASME A17.1-2004, Section 2.20.4.
4. In relevant part, ASME A17.1-2004, Section 2.20.4 states:

2.20.4 Minimum Number and Diameter of Suspension Ropes

...The minimum diameter of hoisting and counterweight ropes shall be 9.5 mm (0.375 in.). Outer wires of the ropes shall be not less than 0.56 mm (0.024 in.) in diameter.

5. An intent of the afore cited requirement of ASME A17.1-2004, Section 2.20.4, is to ensure that the number, diameter, and construction of suspension ropes are adequate to provided safely robust and durable suspension means over the course of the ropes’ foreseen service life.

Proposed Variance Decision

KONE Monospace 500 Elevators with Retractable Platform Guard (Group IV)

Hearing Date: March 23, 2022

6. KONE has represented to Division and Board staff, having established an engineering practice for purposes of Monospace 500 elevator design, of meeting or exceeding the minimum factor of safety of 12 for 8 mm suspension members, as required in ASME A17.1-2010, Section 2.20.3—under which, given that factor of safety, supplemental broken suspension member protection is not required.
7. Also, each Applicant proposes as a further means of maintaining safety equivalence, monitoring the rope in conformity with the criteria specified within the *Inspector's Guide to 6 mm Diameter Governor and 8 mm Diameter Suspension Ropes for KONE Elevators* (per Application attachment "B", or as thereafter revised by KONE subject to Division approval).
8. In addition, each Applicant has proposed to utilize 6 mm diameter governor ropes in variance from Title 8, Section 3141, incorporated ASME A17.1-2004, Section 2.18.5.1.
9. ASME A17.1-2004, Section 2.18.5.1, specifies, in relevant part:

2.18.5.1 Material and Factor of Safety.

... [Governor ropes] not less than 9.5 mm (0.375 in.) in diameter. The factor of safety of governor ropes shall be not less than 5...

10. The Board takes notice of Title 8, Elevator Safety Order Section 3141.7, subpart (a)(10):

A reduced diameter governor rope of equivalent construction and material to that required by ASME A17.1-2004, is permissible if the factor of safety as related to the strength necessary to activate the safety is 5 or greater;

11. Applicants propose use of 6mm governor rope having a safety factor of 5 or greater, in conformity with Section 3141.7(a)(10), the specific parameters of which, being expressly set out within Title 8, Elevator Safety Orders, take precedence over more generally referenced governor rope diameter requirements per ASME A17.1-2004, Section 2.18.5.1. Accordingly, the governor rope specifications being presently proposed, inclusive of a factor of safety of 5 or greater, would comply with current Title 8, Elevator Safety Orders requirements, and therefore not be subject to issuance of permanent variance.
12. Absent evident diminution in elevator safety, over the past decade the Board has issued numerous permanent variances for use in KONE (Ecospace) elevator systems of 8 mm diameter suspension rope materially similar to that presently proposed (e.g. OSHSB File Nos. 06-V-203, 08-V-245, and 13-V-303).

Proposed Variance Decision

KONE Monospace 500 Elevators with Retractable Platform Guard (Group IV)

Hearing Date: March 23, 2022

13. As noted by the Board in OSHSB File Nos. 18-V-044, and 18-V-045, Decision and Order Findings, subpart B.17 (hereby incorporated by reference), the strength of wire rope operating as an elevator's suspension means does not remain constant over its years of projected service life. With increasing usage cycles, a reduction in the cross-sectional area of the wire rope normally occurs, resulting in decreased residual strength. This characteristic is of particular relevance to the present matter because, as also noted by Board staff, decreasing wire rope diameter is associated with a higher rate of residual strength loss. This foreseeable reduction in cross-sectional area primarily results from elongation under sheave rounding load, as well as from wear, and wire or strand breaks. However, these characteristics need not compromise elevator safety when properly accounted for in the engineering of elevator suspension means, and associated components.
14. The presently proposed wire rope is Wuxi Universal steel rope Co LTD. 8 mm 8x19S+8x7+PP, with a manufacturer rated breaking strength of 35.8 kN, and an outer wire diameter of less than 0.56 mm, but not less than 0.51 mm. Both Board staff and Division safety engineers have scrutinized the material and structural specifications, and performance testing data, of this particular proposed rope, and conclude it will provide for safety equivalent to ESO compliant 9.5 mm wire rope, with 0.56 mm outer wire (under conditions of use included within the below Decision and Order).
15. The applicant supplies tabulated data regarding the "Maximum Static Load on All Suspension Ropes." To obtain the tabulated data, the applicant uses the following formula derived from ASME A17.1 2004, Section 2.20.3:

$$W = (S \times N) / f$$

where

W = maximum static load imposed on all car ropes with the car and its rated load at any position in the hoistway

N = number of runs of rope under load. For 2:1 roping,

N shall be two times the number of ropes used, etc.

S = manufacturer's rated breaking strength of one rope

f = the factor of safety from Table 2.20.3

16. ASME A17.1-2010 Sections 2.20.3 and 2.20.4 utilize the same formula, but provide for use of suspension ropes having a diameter smaller than 9.5 mm, under specified conditions, key among them being that use of ropes having a diameter of between 8 mm to 9.5 mm be engineered with a factor of safety of 12 or higher. This is a higher minimum factor of safety than that proposed by Applicant, but a minimum

Proposed Variance Decision

KONE Monospace 500 Elevators with Retractable Platform Guard (Group IV)

Hearing Date: March 23, 2022

recommended by both Board staff and Division as a condition of variance necessary to the achieving of safety equivalence to 9.5 mm rope.

17. Board staff and Division are in accord with Applicant, in proposing as a condition of safety equivalence, that periodic physical examination of the wire ropes be performed to confirm the ropes continue to meet the criteria set out in the (Application attachment) *Inspector's Guide to 6 mm Diameter Governor and 8 mm Diameter Suspension Ropes for KONE Elevators*. Adherence to this condition will provide an additional assurance of safety equivalence, regarding smaller minimum diameter suspension rope outer wire performance over the course of its service life.
18. The Board incorporates by reference the following findings of fact: Subsections 5 through 9, set forth in the "Findings of Fact" Section of the Proposed Decision adopted by the Board on June 18, 2010 regarding OSHSB File No. 08-V-108M1.
19. Applicant proposes to install a two-section retractable platform guard (apron) consisting of a stationary upper section guard plate and a moveable lower section guard plate. To monitor the retractable mechanism, an electrical switching system will be provided to monitor for malfunction.
20. Section 3141 [ASME A17.1-2004, Section 2.15.9.2] states, in part:

2.15.9.2 The guard plate shall have a straight vertical face, extending below the floor surface of the platform, conforming to one of the following:

(a) where the elevator is required to conform to 2.19.2.2(b) the depth of the truck zone, where provided, plus 75 mm (3 in.), but in no case less than 1,220 mm (48 in.).

An intent of this code section is to guard a hazardous opening to the hoistway if the elevator car is intentionally or unintentionally positioned above the landing zone, by providing a guard that extends below the car platform to obstruct the opening.

21. Section 3141 [ASME A17.1-2004, Section 2.4.1.5] states, in part:

2.4.1.5 When the car is resting on its fully compressed buffers or bumpers, no part of the car, or any equipment attached thereto or equipment traveling with the car, shall strike any part of the pit or any equipment mounted therein.

Proposed Variance Decision

KONE Monospace 500 Elevators with Retractable Platform Guard (Group IV)

Hearing Date: March 23, 2022

22. An intent of this code section is to prevent any equipment attached to the elevator car from striking any part of the pit. This could damage the elevator equipment, which may result in unsafe operation or injury.
23. Per Division's Review of Application (Exhibit PD-4) Applicant's proposed platform guard is similar in all material respects to installations for which a permanent variance previously has been granted. (e.g. 18-V-010M1).
24. Both Board staff, and Division, by way of written submissions to the record (Exhibits PD-3 and PD-4 respectively), and stated positions at hearing, are of the well informed opinion that grant of permanent variance, as limited and conditioned per the below Decision and Order will provide employment, places of employment, and subject conveyances, as safe and healthful as would prevail given non-variant conformity with the Elevator Safety Order requirements from which variance has been requested.

D. Conclusive Findings:

The above stated procedural prerequisites, legal authority, and factual findings, as further supported by the documentary record and hearing testimony in this matter, provide a substantive and reasonable basis of conclusion that: (1) Each Applicant has complied with the statutory and regulatory requirements that must be met before an application for permanent variance may be conditionally granted; and (2) a preponderance of the evidence establishes that each Applicants proposal, subject to all conditions and limitations set forth in the below Decision and Order, will provide equivalent safety and health to that which would prevail upon full compliance with the requirements of California Code of Regulation, Title 8, Elevator Safety Orders from which variance is being sought.

E. Decision and Order:

Each Application being the subject of this proceeding, per the table in Jurisdictional and Procedural Matters, section 1 above, is conditionally GRANTED, to the extent that each such Applicant shall be issued permanent variance from California Code of Regulations, Title 8, section 3141 shall be GRANTED subject to the following conditions and limitations:

Elevator Safety Orders:

- Minimum Diameter of Suspension Ropes: 2.20.4 (Only to the extent necessary to permit the use of 8 mm [0.0315 in.] diameter suspension ropes, where the Elevator Safety Orders require a minimum diameter of 9.5 mm [0.375]);
- Platform Guard: 2.15.9.2 (Only to the extent necessary to permit the use of a two-section retractable platform guard (apron) where the depth of the pit is not sufficient enough to

Proposed Variance Decision

KONE Monospace 500 Elevators with Retractable Platform Guard (Group IV)

Hearing Date: March 23, 2022

prevent the platform guard from contacting the floor when the car is resting on its fully compressed buffers or bumpers); and

- Bottom Car Clearances: 2.4.1.5 (Only to the extent necessary to permit the two-section retractable platform guard (apron) to contact the pit floor).

Conditions:

1. The diameter of the hoisting steel ropes shall be not less than 8 mm (0.315 in) diameter and the roping ratio shall be two to one (2:1).
2. The outer wires of the suspension ropes shall be not less than 0.51 mm (0.02 in.) in diameter.
3. The number of suspension ropes shall be not fewer than those specified per hereby incorporated Decision and Order Appendix 1 Table.
4. The ropes shall be inspected annually for wire damage (rouge, valley break etc.) in accordance with "KONE Inc. Inspector's Guide to 6 mm diameter and 8 mm diameter steel ropes for KONE Elevators" (per Application Exhibit B, or as thereafter amended by KONE subject to Division approval).
5. A rope inspection log shall be maintained and available in the elevator controller room / space at all times.
6. The elevator rated speed shall not exceed those speeds specified per the Decision and Order Appendix 1 Table.
7. The maximum suspended load shall not exceed those weights (plus 5%) specified per the Decision and Order Appendix 1 Table.
8. The opening to the hoistway shall be effectively barricaded when car top inspection, maintenance, servicing, or testing of the elevator equipment in the hoistway is required. If the service personnel must leave the area for any reason, the hoistway and control room doors shall be closed.
9. The installation shall meet the suspension wire rope factor of safety requirements of ASME A17.1-2013 Section 2.20.3.
10. The Applicant shall comply with suspension means replacement reporting condition per hereby incorporated Decision and Order Appendix 2.

Proposed Variance Decision

KONE Monospace 500 Elevators with Retractable Platform Guard (Group IV)

Hearing Date: March 23, 2022

11. In lieu of the straight vertical face (one-piece) platform guards (aprons) required by Section 3141 [ASME A17.1-2004, Section 2.15.9.2], a two-section retractable platform guard consisting of a stationary, upper-section guard plate and a moveable, lower-section guard plate shall be installed to conform to the following:
 - a. The stationary, upper-section guard plate shall have a straight vertical face, extending below the floor surface of the platform; the height shall be not less than 920 mm (36.2 in).
 - b. The movable, lower-section guard plate shall:
 - i. Comply with ASME A17.1-2004, Section 2.15.9.3;
 - ii. Be provided a rubber bumper at the center of the bottom edge of the plate to absorb the impact when the toe guard strikes the concrete pit floor;
 - iii. Be provided with an electrical switch that indicates to the control system that the retractable platform guard is in its extended position (when car is away from the bottom landing), and be provided with a second electrical switch that indicates to the control system that the moveable lower section is in its retracted position (when the car is at the bottom landing), thereby overriding the first switch. Failure of either of these electrical switches or of the mechanical parts that activate these electrical switches shall cause the controller to remove power from the driving machine and brake.
 - c. The two-section retractable platform guard shall be provided with smooth metal guard plates of not less than 1.5 mm (0.059 in) thick steel, or material of equivalent strength and stiffness, adequately reinforced and braced to the car platform and conforming to ASME A17.1-2004, sections 2.15.9.1 and 2.15.9.4.
 - d. The overall height of the two-section retractable platform guard shall be not less than 1220 mm (48 in) when the moveable lower section is in the fully extended (deployed) position.
 - e. The elevator rated speed shall be equal to or less than 200 feet per minute.
 - f. The opening to the hoistway shall be effectively barricaded when car top inspection, maintenance, servicing, or testing of the elevator equipment in the hoistway is required. If the service personnel must leave the area for any reason, the hoistway and control room doors shall be closed.
12. Any Certified Qualified Conveyance Company performing inspections, maintenance, servicing or testing the elevators shall be provided a copy of this variance decision.

Proposed Variance Decision

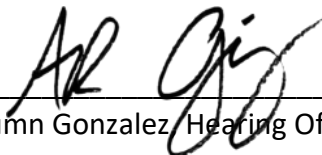
KONE Monospace 500 Elevators with Retractable Platform Guard (Group IV)

Hearing Date: March 23, 2022

13. The Division shall be notified when the elevator is ready for inspection. The elevator shall be inspected by the Division and a "Permit to Operate" issued before the elevator is placed in service.
14. The Applicant shall notify its employees or their authorized representative(s), or both, of this order in the same way and to the same extent that employees and authorized representatives are to be notified of docketed permanent variance applications pursuant to California Code of Regulations, Title 8, Sections 411.2 and 411.3.
15. This Decision and Order shall remain in effect unless modified or revoked upon application by the Applicant, affected employee(s), the Division of Occupational Safety and Health, or by the Board on its own motion, in accordance with procedures per Title 8, Division 1, Chapter 3.5.

Pursuant to California Code of Regulations, Title 8, Section 426(b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

Dated: March 24, 2022



Autumn Gonzalez, Hearing Officer

Proposed Variance Decision

KONE Monospace 500 Elevators with Retractable Platform Guard (Group IV)

Hearing Date: March 23, 2022

Appendix 1

	Monospace 500 Suspension Ropes Appendix 1 Table			
OSHSB File No.	Elevator ID	Minimum Quantity of Ropes (per Condition 3)	Maximum Speed in Feet per Minute (per Condition 6)	Maximum Suspended Load (per Condition 7)
22-V-012	1	6	150	10,497

Appendix 2

Suspension Means Replacement Reporting Condition

Beginning on the date the Board adopts this Proposed Decision and continuing for a period of two years, the Applicant shall report to the Division within 30 days any and all replacement activity performed on the elevator(s) pursuant to the requirements of ASME A17.1-2004, Section 8.6.3 involving the suspension means or suspension means fastenings. Further:

1. A separate report for each elevator shall be submitted, in a manner acceptable to the Division, to the following address (or to such other address as the Division might specify in the future): DOSH Elevator Unit, 2 MacArthur Place, Suite 700, Santa Ana, CA 92707, Attn: Engineering Section.
2. Each such report shall contain, but not necessarily be limited to, the following information:
 - a. The State-issued conveyance number, complete address, and OSHSB file number that identifies the permanent variance.
 - b. The business name, complete address, telephone number, and contact person of the elevator responsible party (presumably the Applicant or the subsequent holder of this variance).
 - c. The business name, complete address, telephone number, and Certified Qualified Conveyance Company (CQCC) certification number of the firm performing the replacement work.
 - d. The name (as listed on certification), Certified Competent Conveyance Mechanic (CCCM) certification number, certification expiration date, and signature of each CCCM performing the replacement work.
 - e. The date and time the elevator was removed from normal service for suspension replacement, the date and time the replacement work commenced, the date and time the replacement work was completed, and the date and time the elevator was returned to normal service.
 - f. A detailed description of, and clear color photographs depicting, (1) all the conditions that existed in the suspension components requiring their replacement and (2) any conditions that existed to cause damage or distress to the suspension components being replaced.

Proposed Variance Decision

KONE Monospace 500 Elevators with Retractable Platform Guard (Group IV)

Hearing Date: March 23, 2022

- g. A detailed list of all elevator components adjusted, repaired, or replaced in conjunction with the suspension component replacement.
 - h. All information provided on the crosshead data plate per ASME A17.1-2004, Section 2.20.2.1, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - i. For the suspension means being replaced, all information provided on the data tag required per ASME A17.1-2004, Section 2.20.2.2, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - j. For the replacement suspension means, all information provided on the data tag required by ASME A17.1-2004, Section 2.20.2.2, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - k. Any other information requested by the Division regarding the replacement of the suspension means or fastenings.
3. In addition to the submission of the report to the Division, the findings of any testing, failure analysis, or other engineering evaluations performed on any portion of the replaced suspension components, or other elevator components replaced in conjunction therewith, shall be submitted to the Division referencing the information contained in above Appendix 2, Section 2, Subsection (a), above.

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application for
Permanent Variance regarding:

Schindler Model 5500 Elevators (Group IV)

OSHSB File No.: see Section A.1 table of
Proposed Decision Dated: March 24, 2022

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached
PROPOSED DECISION by Autumn Gonzalez, Hearing Officer.

DAVID THOMAS, Chairman

BARBARA BURGEL, Member

KATHLEEN CRAWFORD, Member

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date of Adoption: April 21, 2022

THE FOREGOING VARIANCE DECISION WAS
ADOPTED ON THE DATE INDICATED ABOVE.
IF YOU ARE DISSATISFIED WITH THE
DECISION, A PETITION FOR REHEARING
MAY BE FILED BY ANY PARTY WITH THE
STANDARDS BOARD WITHIN TWENTY (20)
DAYS AFTER SERVICE OF THE DECISION.
YOUR PETITION FOR REHEARING MUST
FULLY COMPLY WITH THE REQUIREMENTS
OF CALIFORNIA CODE OF REGULATIONS,
TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be
posted for the Applicant's employees to
read, and/or a copy thereof must be
provided to the employees' Authorized
Representatives.

BEFORE THE
 OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
 DEPARTMENT OF INDUSTRIAL RELATIONS
 STATE OF CALIFORNIA

<p>In the Matter of Application for Permanent Variance regarding:</p> <p style="text-align: center;">Schindler Model 5500 Elevators (Group IV)</p>	<p>OSHSB File Nos. See section A.1 Table below</p> <p style="text-align: center;"><u>PROPOSED DECISION</u></p> <p>Hearing Date: March 23, 2022</p>
--	--

A. Subject Matter:

- Each below listed applicant (“Applicant”) has applied for permanent variance from certain provisions of the Elevator Safety Orders, found at title 8, of the California Code of Regulations, with respect to a conveyance, or conveyances, in the listed quantity, at the listed location:

Variance No.	Applicant Name	Variance Location Address	No. of Elevators
22-V-032	Los Angeles World Airports	ConRAC 9523 S. La Cienega Blvd. Los Angeles, CA	1

- The safety orders at issue are set out in below section C.1.

B. Process and Procedure:

- This proceeding is conducted in accordance with Labor Code section 143, and California Code of Regulations, title 8, section 401, et. seq.
- The installation contract for the subject elevators was signed after May 1, 2008. Therefore, the subject elevators fall within the scope of the Elevator Safety Orders (ESO) Group IV section 3141, and as incorporated by reference therein, ASME A17.1-2004.
- This hearing was held on March 23, 2022, in Sacramento, California, via teleconference, by Occupational Safety and Health Standards Board (“Board”) assigned Hearing Officer, Autumn Gonzalez, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with California Code of Regulations, title 8, section 426.
- At the hearing, Jennifer Linares, with Schindler Elevator Corporation, appeared on behalf of each Applicant; Mark Wickens and David Morris appeared on behalf of the

*Proposed Variance Decision
Schindler Model 5500 Elevators (Group IV)
Hearing Date: March 23, 2022*

Division of Occupational Safety and Health (“Division”), and Michael Nelmidia appeared on behalf of Board staff, in a technical advisory role apart from the Board.

5. Oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence:

Exhibit Number	Description of Exhibit
PD-1	Permanent variance applications per section A.1 table
PD-2	OSHSB Notice of Hearing
PD-3	Board Staff Reviews of Variance Application
PD-4	Division Reviews of Variance Application
PD-5	Review Draft-1 Proposed Decision

Official notice is taken of the Board’s rulemaking records, and variance decisions concerning the safety order requirements from which variance is requested. At close of hearing on March 23, 2022, the record was closed, and the matter taken under submission by the Hearing Officer.

- C. Findings of Fact—Based upon the record of this proceeding, the Board finds the following:

Requested Suspension Means Related Variance:

1. As each pertains to the non-circular elastomeric coated suspension means characteristic of the Schindler Model 5500 elevator, Applicant presently seeks permanent variance from the following title 8, Elevator Safety Order incorporated ASME Safety Code for Elevators and Escalators (ASME Code) A17.1-2004 sections and subsections:

- Section 2.20.1—Wire rope suspension means
- Section 2.20.2.1—Crosshead data plate
- Subsection 2.20.2.2(a)—Wire rope data tag
- Subsection 2.20.2.2(f)—ID of steel wire rope as preformed or nonpreformed
- Section 2.20.3—Wire rope safety factor
- Section 2.20.4—Number and diameter of wire ropes
- Section 2.20.9.3.4—Wire rope end connections
- Section 2.20.9.5.4—Wire rope sockets

Requested Car Top Railing Inset Variance:

2. As it pertains to top of car railing placement requiring space occupied by upper hoistway mounted elevator machinery characteristic of the Schindler Model 5500 elevator, Applicant presently seeks permanent variance from the following title 8, Elevator Safety Order incorporated ASME Code A17.1-2004 section:

Section 2.14.1.7.1—Top of Car Perimeter Railing Placement

Requested Seismic Reset Switch Placement Variance:

3. As it pertains to installation of the requisite seismic reset switch within a “machine room” location incompatible with machine-room-less design of the Schindler Model 5500 elevator, Applicant presently seeks permanent variance from the following title 8, Elevator Safety Order incorporated ASME Code subsection:

Subsection 8.4.10.1.1(a)(2)(b)--Seismic Reset Switch Placement in Machine Room

Requested Transfer Switch Placement Variance:

4. As it pertains to installation of the requisite transfer switch within a “machine room” location incompatible with machine-room-less design of the Schindler Model 5500 elevator, Applicant presently seeks permanent variance from the following title 8, Elevator Safety Order incorporated ASME Code A17.1-2004 subsection:

Subsection 2.26.1.4.4(a)--Transfer Switch Placement in Machine Room

Official Notice and Incorporation by Reference—OSHSB File No. 15-V-349:

5. Per hereby entered stipulation offered at hearing by Applicant, Division, and Board staff, concerning preexisting Board records, including decisions in matters of permanent variance from Elevator Safety Order requirements, the Board takes Official Notice and expressly incorporates herein by reference, OSHSB File No. 15-V-349, Decision and Order adopted November 17, 2016, section D.1—D.75 findings, and therein entered record upon which it was based.

Positions of Division, and Board Staff:

6. Having fully reviewed Applicant’s request for variance from the above identified Elevator Safety Order requirements, it is the concurrent opinion of Division and Board staff, that conditionally limited grant to Applicant of permanent variance as specified

*Proposed Variance Decision
Schindler Model 5500 Elevators (Group IV)
Hearing Date: March 23, 2022*

per the below Decision and Order, will provide for elevator safety, and occupational safety and health, equivalent or superior to that of the Elevator Safety Order requirements from which variance is being sought. The present opinion of Division and Board staff, to any extent it may vary from those previously held with respect to the previously heard matter in OSHSB File No. 15-V-349, reflects further scrutiny of the subject matter, consultation between Division, Board staff, Applicant representatives, and refinement of recommended conditions and limitations.

D. Basis of Decision:

The afore stated procedural, statutory, regulatory, and factual matters establish a substantive reasonable basis of conclusion that: (1) Applicant has complied with the statutory and regulatory requirements that must be met before an application for permanent variance may be conditionally granted, and (2) a preponderance of the evidence establishes that Applicant's proposal, subject to all conditions and limitations set forth in the below Decision and Order, will provide equivalent safety and health to that which would prevail upon full compliance with the requirements of California Code of Regulation, title 8, Elevator Safety Orders from which variance is being sought.

E. Decision and Order:

Each above section A.1 table specified Applicant, with respect to the also specified number of conveyance, and variance location, is hereby conditionally GRANTED Permanent Variance as stated below, to the limited extent that each enumerated conveyance at the given location shall be subject to conditionally limited permanent variance from the below specified ASME A17.1-2004, requirements incorporated by reference into California Code of Regulations, title 8, Elevator Safety Orders, section 3141.

Suspension Members: Applicant shall conditionally hold permanent variance from the following title 8, section 3141 incorporated sections and subsections of ASME A17.1-2004, to the limited extent variance is necessary to provide for use of noncircular elastomeric-coated steel suspension members and concomitant components, and configurations— section 2.20.1; section 2.20.2.1; subsection 2.20.2.2(a); subsection 2.20.2.2(f); section 2.20.3; section 2.20.4; section 2.20.9.3.4; and section 2.20.9.5.4.

Inspection Transfer Switch: Applicant shall conditionally hold permanent variance from certain requirements of the following title 8, section 3141 incorporated section of ASME A17.1-2004, to the extent variance is necessary to having the requisite inspection transfer switch located elsewhere than a machine room, within a Security Group I enclosure built into an upper floor landing door jam, or within other readily accessible and

secure space shared with the motion controller outside the hoistway: section 2.26.1.4.4(a).

Seismic Safety Switch Placement: Applicant shall conditionally hold permanent variance from certain requirements of the following title 8, section 3141 incorporated section of ASME A17.1-2004, to the limited extent variance is necessary to having the requisite seismic reset switch located elsewhere than a machine room, within a Security Group I enclosure built into an upper floor landing door jam, or within other readily accessible and secure space shared with the motion controller outside the hoistway: section 8.4.10.1.1(a)(2)(b).

Car Top Railing: Applicant shall conditionally hold permanent variance from certain requirements of the following title 8, section 3141 incorporated section of ASME A17.1-2004, to the limited extent variance is necessary to provide for the below specified inseting of the subject elevator's top of car railing: section 2.14.1.7.1.

Further Conditions and Limitations:

1. The elevator suspension system shall comply with the following:
 - 1.1. The suspension traction media (STM) members and their associated fastenings shall conform to the applicable requirements of ASME A17.1-2013, sections:
 - 2.20.4.3 – Minimum Number of Suspension Members
 - 2.20.3 – Factor of Safety
 - 2.20.9 – Suspension Member Fastening
 - 1.2. Additionally, STMs shall meet or exceed all requirements of ASME 17.6-2010 Standard for Elevator Suspension, Compensation, and Governor Systems, Part 3 Noncircular Elastomeric Coated Steel Suspension Members for Elevators.
 - 1.3. The Applicant shall not utilize the elevator unless the manufacturer has written procedures for the installation, maintenance, inspection and testing of the STM members and fastenings and related monitoring and detection systems and criteria for STM replacement, and the Applicant shall make those procedures and criteria available to the Certified Competent Conveyance Mechanic (CCCM) at the location of the elevator, and to the Division of Occupational Safety and Health (Division) upon request.

- 1.4. STM member mandatory replacement criteria shall include:
 - 1.4.1 Any exposed wire, strand or cord;
 - 1.4.2 Any wire, strand or cord breaks through the elastomeric coating;
 - 1.4.3 Any evidence of rouging (steel tension element corrosion) on any part of the elastomeric coated steel suspension member;
 - 1.4.4 Any deformation in the elastomeric suspension member such as, but not limited to, kinks or bends.
- 1.5. Traction drive sheaves must have a minimum diameter of 72 mm. The maximum speed of STM members running on 72 mm, 87 mm and 125 mm drive sheaves shall be no greater than 2.5 m/s, 6.0 m/s and 8.0 m/s respectively.
- 1.6. If any one STM member needs replacement, the complete set of suspension members on the elevator shall be replaced. Exception: If a new suspension member is damaged during installation, and prior to any contemporaneously installed STM having been placed into service, it is permissible to replace the individual damaged suspension member. STM members that have been installed on another installation shall not be re-used.
- 1.7. A traction loss detection means shall be provided that conforms to the requirements of ASME A17.1-2013, section 2.20.8.1. The means shall be tested for correct function annually in accordance with ASME A17.1-2013, section 8.6.4.19.12.
- 1.8. A broken suspension member detection means shall be provided that conforms to the requirements of ASME A17.1-2013, section 2.20.8.2. The means shall be tested for correct function annually in accordance with ASME A17.1-2013, section 8.6.4.19.13(a).
- 1.9. An elevator controller integrated bend cycle monitoring system shall monitor actual STM bend cycles, by means of continuously counting, and storing in nonvolatile memory, the number of trips that the STM makes traveling, and thereby being bent, over the elevator sheaves. The bend cycle limit monitoring means shall automatically stop the car normally at the next available landing before the bend cycle correlated residual strength of any single STM member drops below 80 percent of full rated strength. The monitoring means shall prevent the car from restarting. Notwithstanding any less frequent periodic

Proposed Variance Decision
Schindler Model 5500 Elevators (Group IV)
Hearing Date: March 23, 2022

testing requirement per Addendum 1 (Division Circular Letter), the bend cycle monitoring system shall be tested semi-annually in accordance with the procedures required per above Conditions 1.2, and 1.3.

- 1.10. Each elevator shall be provided with a device that electronically detects a reduction in residual strength of each STM member. The device shall be in compliance with Division Circular Letter E-10-04, a copy of which is attached hereto as Addendum 1, and incorporated herein by reference.
 - 1.11. The elevator crosshead data plate shall comply with the requirements of ASME A17.1-2013, section 2.20.2.1.
 - 1.12. A suspension means data tag shall be provided that complies with the requirements of ASME A17.1-2013, section 2.20.2.2.
 - 1.13. Comprehensive visual inspections of the entire length of each and all installed suspension members, in conformity with above Conditions 1.2 and 1.3 specified criteria, shall be conducted and documented every six months by a CCCM.
 - 1.14. The Applicant shall be subject to the requirements per hereto attached, and inhere incorporated, Addendum 2, "Suspension Means Replacement Reporting Condition."
 - 1.15. Records of all tests and inspections shall be maintenance records subject to ASME A17.1-2004, sections 8.6.1.2 and 8.6.1.4, respectively.
2. Inspection Transfer switch and Seismic Reset switch placement and enclosure shall comply with the following:
- 2.1. If the inspection transfer switch required by ASME A17.1-2004, Rule 2.26.1.4.4 does not reside in a machine room, that switch shall not reside in the elevator hoistway. The switch shall reside in the control/machinery room/space containing the elevator's control equipment in an enclosure secured by a lock openable by a Group 1 security key. The enclosure is to remain locked at all times when not in use.
 - 2.2. If the seismic reset switch does not reside in the machine room, that switch shall not reside in the elevator hoistway. The switch shall reside in the control/machinery room/space containing the elevator's control equipment in an enclosure secured by a lock openable by a Group 1 security key. The enclosure is to remain locked at all times when not in use.

3. Any and all inset car top railing shall comply with the following:
 - 3.1. Serviceable equipment shall be positioned so that mechanics and inspectors do not have to stand on or climb over the railings to perform adjustments, maintenance, repairs or inspections. The Applicant shall not permit anyone to stand or climb over the car top railing.
 - 3.2. The distance that the railing can be inset shall be limited to not more than 12 inches.
 - 3.3. All exposed areas of the car top outside the car top railing where the distance from the railing to the edge of the car top exceeds 2 inches, shall be beveled with metal, at an angle of not less than 75 degrees with the horizontal, from the mid or top rail to the outside of the car top, such that no person or object can stand, sit, kneel, rest, or be placed in the exposed areas.
 - 3.4. The top surface of the beveled area and/or car top outside the railing, shall be clearly marked. The markings shall consist of alternating 4 inch diagonal red and white stripes.
 - 3.5. The applicant shall provide durable signs with lettering not less than 1/2 inch on a contrasting background on each inset railing; each sign shall state:

**CAUTION
STAY INSIDE RAILING
NO LEANING BEYOND RAILING
NO STEPPING ON, OR BEYOND, RAILING**

- 3.6. The Group IV requirements for car top clearances shall be maintained (car top clearances outside the railing will be measured from the car top and not from the required bevel).
4. The elevator shall be serviced, maintained, adjusted, tested, and inspected only by CCCM having been trained, and competent, to perform those tasks on the Schindler Model 5500 elevator system in accordance with written procedures and criteria, including as required per above Conditions 1.2, and 1.3.
5. The Division shall be notified when the elevator is ready for inspection. The elevator shall be inspected by the Division, and all applicable requirements met, including conditions of this permanent variance, prior to a Permit to Operate the elevator being


*Proposed Variance Decision
Schindler Model 5500 Elevators (Group IV)
Hearing Date: March 23, 2022*

issued. The elevator shall not be placed in service prior to the Permit to Operate being issued by Division.

6. The Applicant shall notify its employees or their authorized representative(s), or both, of this order in the same way and to the same extent that employees and authorized representatives are to be notified of docketed permanent variance applications pursuant to California Code of Regulations, title 8, sections 411.2 and 411.3.
7. This Decision and Order shall remain in effect unless modified or revoked upon application by Applicant, affected employee(s), the Division, or by the Board on its own motion, in accordance with title 8, Division 1, Chapter 3.5, procedural rules.

Pursuant to California Code of Regulations, title 8, section 426(b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

Dated: March 24, 2022



Autumn Gonzalez, Hearing Officer

ADDENDUM 1

October 6, 2010

CIRCULAR LETTER E-10-04

TO: Installers, Manufacturers of Conveyances and Related Equipment and, Other Interested Parties

SUBJECT: Coated Steel Belt Monitoring

The Elevator Safety Orders require routine inspection of the suspension means of an elevator to assure its safe operation.

The California Labor Code section 7318 allows the Division to promulgate special safety orders in the absence of regulation.

As it is not possible to see the steel cable suspension means of a Coated Steel Belt, a monitoring device which has been accepted by the Division is required on all Coated Steel Belts which will automatically stop the car if the residual strength of any belt drops below 60%. The Device shall prevent the elevator from restarting after a normal stop at a landing.

The monitoring device must be properly installed and functional. A functioning device may be removed only after a determination has been made that the residual strength of each belt exceeds 60%. These findings and the date of removal are to be conspicuously documented in the elevator machine room. The removed device must be replaced or returned to proper service within 30 days.

If upon routine inspection, the monitoring device is found to be in a non-functional state, the date and findings are to be conspicuously documented in the elevator machine room.

If upon inspection by the Division, the monitoring device is found to be non-functional or removed, and the required documentation is not in place, the elevator will be removed from service.

If the device is removed to facilitate belt replacement, it must be properly installed and functional before the elevator is returned to service.

A successful test of the device's functionality shall be conducted once a year.

This circular does not preempt the Division from adopting regulations in the future, which may address the monitoring of Coated Steel Belts or any other suspension means.

This circular does not create an obligation on the part of the Division to permit new conveyances utilizing Coated Steel Belts.

Debra Tudor
Principal Engineer
DOSH-Elevator Unit HQS

ADDENDUM 2

Suspension Means – Replacement Reporting Condition

Beginning on the date the Board adopts this Proposed Decision and continuing for a period of two years, the Applicant shall report to the Division within 30 days any and all replacement activity performed on the elevator(s) pursuant to the requirements of ASME A17.1-2004, section 8.6.3 involving the suspension means or suspension means fastenings.

Further:

1. A separate report for each elevator shall be submitted, in a manner acceptable to the Division, to the following address (or to such other address as the Division might specify in the future): DOSH Elevator Unit, 2 MacArthur Place, Suite 700, Santa Ana, CA 92707, Attn: Engineering section.
2. Each such report shall contain, but not necessarily be limited to, the following information:
 - a. The State-issued conveyance number, complete address, and OSHSB file number that identifies the permanent variance.
 - b. The business name, complete address, telephone number, and contact person of the elevator responsible party (presumably the Applicant or the subsequent holder of this variance).
 - c. The business name, complete address, telephone number, and Certified Qualified Conveyance Company (CQCC) certification number of the firm performing the replacement work.
 - d. The name (as listed on certification), Certified Competent Conveyance Mechanic (CCCM) certification number, certification expiration date, and signature of each CCCM performing the replacement work.
 - e. The date and time the elevator was removed from normal service for suspension replacement, the date and time the replacement work commenced, the date and time the replacement work was completed, and the date and time the elevator was returned to normal service.

Proposed Variance Decision

Schindler Model 5500 Elevators (Group IV)

Hearing Date: March 23, 2022

- f. A detailed description of, and clear color photographs depicting, (1) all the conditions that existed in the suspension components requiring their replacement and (2) any conditions that existed to cause damage or distress to the suspension components being replaced.
 - g. A detailed list of all elevator components adjusted, repaired, or replaced in conjunction with the suspension component replacement.
 - h. All information provided on the crosshead data plate per ASME A17.1-2004, section 2.20.2.1, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - i. For the suspension means being replaced, all information provided on the data tag required per ASME A17.1-2004, section 2.20.2.2, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - j. For the replacement suspension means, all information provided on the data tag required by ASME A17.1-2004, section 2.20.2.2, unless that ASME requirement is modified by the conditions of a variance that pertains to the elevator in question, in which case, the information to be reported shall be the information required by the ASME provision as modified by the variance.
 - k. Any other information requested by the Division regarding the replacement of the suspension means or fastenings.
3. In addition to the submission of the report to the Division, the findings of any testing, failure analysis, or other engineering evaluations performed on any portion of the replaced suspension components, or other elevator components replaced in conjunction therewith, shall be submitted to the Division referencing the information contained in item 2a above.

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
(916) 274-5721

In the Matter of Application for
Permanent Variance regarding:

Otis Elevator Controller Alteration
(Group IV)

OSHSB File No.: See Section A.1 Table of
Proposed Decision Dated: March 24, 2022

DECISION

The Occupational Safety and Health Standards Board hereby adopts the attached
PROPOSED DECISION by Autumn Gonzalez, Hearing Officer.

DAVID THOMAS, Chairman

BARBARA BURGEL, Member

KATHLEEN CRAWFORD, Member

DAVID HARRISON, Member

NOLA KENNEDY, Member

CHRIS LASZCZ-DAVIS, Member

LAURA STOCK, Member

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date of Adoption: April 21, 2022

THE FOREGOING VARIANCE DECISION WAS
ADOPTED ON THE DATE INDICATED ABOVE.
IF YOU ARE DISSATISFIED WITH THE
DECISION, A PETITION FOR REHEARING
MAY BE FILED BY ANY PARTY WITH THE
STANDARDS BOARD WITHIN TWENTY (20)
DAYS AFTER SERVICE OF THE DECISION.
YOUR PETITION FOR REHEARING MUST
FULLY COMPLY WITH THE REQUIREMENTS
OF CALIFORNIA CODE OF REGULATIONS,
TITLE 8, SECTIONS 427, 427.1 AND 427.2.

Note: A copy of this Decision must be
posted for the Applicant's employees to
read, and/or a copy thereof must be
provided to the employees' Authorized
Representatives.

BEFORE THE
 OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
 DEPARTMENT OF INDUSTRIAL RELATIONS
 STATE OF CALIFORNIA

<p>In the Matter of Application for Permanent Variance Regarding:</p> <p>Otis Elevator Controller Alteration (Group IV)</p>	<p>OSHSB File Nos.: See Section A.1 table below</p> <p><u>PROPOSED DECISION</u></p> <p>Hearing Date: March 23, 2022</p>
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A. Subject Matter

- Each below listed applicant (“Applicant”) has applied for permanent variances from provisions of the Elevator Safety Orders, found at Title 8 of the California Code of Regulations, with respect to the listed conveyance or conveyances, in the specified quantity, at the specified location:

Variance No.	Applicant Name	Variance Location Address	No. of Elevators
22-V-033	USBT Property Owner LP	US Bank Tower 633 West Fifth Street Los Angeles, CA	20

- The safety orders at issue is California Code of Regulations, Title 8, Elevator Safety Order (ESO), Section 3141, incorporated ASME A17.1-2004, Section 2.26.9.4.

B. Procedural

- This proceeding is conducted in accordance with Labor Code Section 143, and California Code of Regulations, Title 8, Section 401, et. seq.
- This hearing was held on March 23, 2022, in Sacramento, California, and via teleconference, by Occupational Safety and Health Standards Board (“Board”), with Hearing Officer Autumn Gonzalez, both presiding and hearing the matter on its merit, as a basis of proposed decision to be advanced to the Board for its consideration, in accordance with California Code of Regulations, Title 8, Section 426.
- At the hearing, Dan Leacox of Leacox & Associates, and Wolter Geesink with Otis Elevator, appeared on behalf of the Applicants’ representative, the Otis Elevator Company; Mark Wickens and David Morris appeared on behalf of the Division of Occupational Safety and Health (“Division”), and Michael Nelmda appeared on behalf of Board staff, in a technical advisory role apart from the Board.
- Documentary and oral evidence was received at the hearing, and by stipulation of all parties, documents were admitted into evidence:

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Exhibit Number	Description of Exhibit
PD-1	Application(s) for Permanent Variance per section A.1 table
PD-2	OSHSB Notice of Hearing
PD-3	Board Staff Review of Variance Application
PD-4	Division Review of Variance Application
PD-5	Review Draft-1 Proposed Decision

Official notice is taken of the Board’s files, records, recordings and decisions concerning the Elevator Safety Order requirements from which variance shall issue. On March 23, 2022, the hearing and record closed, and the matter was taken under submission by the Hearing Officer.

C. Findings of Fact

1. Respecting, and for the purpose of alteration to, each above Section A.1 table listed conveyance at the specified variance locations, in the specified quantities, each Section A.1 table listed Applicant has applied for a permanent variance from California Code of Regulations, Title 8, Section 3141 incorporated ASME A17.1-2004, Section 2.26.9.4, requirements (per Section 8.7.2.27.4(a)).

2. ASME A17.1-2004, Section 2.26.9.4, states:

“2.26.9.4 Redundant devices used to satisfy 2.26.9.3 in the determination of the occurrence of a single ground, or the failure of any single magnetically operated switch, contactor or relay, or of any single solid state device, or any single device that limits the leveling or truck zone, or a software system failure, shall be checked prior to each start of the elevator from a landing, when on automatic operation. When a single ground or failure, as specified in 2.26.9.3, occurs, the car shall not be permitted to restart. Implementation of redundancy by a software system is permitted, provided that the removal of power from the driving-machine motor and brake shall not be solely dependent on software-controlled means.”

3. A principal intent of this code requirement is to avoid hazards that would be created by the failure of critical elevator safety circuits. Toward this purpose, use of software as the sole method of controlling such critical elevator safety circuits is prohibited.

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4. Each Applicant proposes the use of a SIL rated software system and circuits consisting of three computer control boards that communicate on a Control Area Network (CAN) to monitor elevator safety devices and perform certain safety functions. Elevator electrical protective devices (EPDs) and other control devices are connected to these control boards. Software specifically designed for this SIL system would continuously monitor these devices and performs certain elevator safety functions. The design of this SIL rated software system and its related circuits includes a redundant (software) means to remove the power from the driving machine motor and brake under certain conditions.
5. The proposed Otis E2 elevator control system is to interface with a software system and related circuits having a certain Safety Integrity Level (SIL) rating, to monitor, process, and execute certain safety functions of the elevator, in a manner and configuration noncompliant with California ESO incorporated ASME A17.1-2004, Section 2.26.9.4, preclusion of safety system redundancy solely dependent upon a software controlled means.
6. The Applicant contends that the proposed SIL rated software system and its circuits conform to the relevant newer ASME A17.1 provisions—namely ASME A17.1-2013, Section 2.26.9.3.2.
7. ASME A17.1-2013, Section 2.26.9.3.2, states:

“2.26.9.3.2 Methods used to satisfy 2.26.9.3.1 using software systems are permitted, provided that (a) a non-software-controlled means is also used to remove power from the driving-machine motor and brake, or (b) the software system and related circuits are listed/certified to a SIL rating that is in accordance with the applicable requirements of IEC 61508-2 and IEC 61508-3. This software system and its related circuits shall have a SIL of not less than the highest SIL value of the safety function(s) in Table 2.26.4.3.2 used in the circuit. The software system and related circuits shall be identifiable on wiring diagrams (see 8.6.1.6.3) with part identification, SIL, and certification identification information that shall be in accordance with the certifying organization’s requirements.”
8. The Division has performed a safety analyzes of the proposed SIL rated software system and its related circuits, and determined the proposed system to be in conformity with relevant requirements of ASME A17.1-2013, Section 2.26.9.3.2, addressing safety issues associated with the proposed use of such a software system.

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9. The equivalence of ASME A17.1-2013, Section 2.26.9.3.2, compliant control systems of the proposed type, with the safety of ASME A17.1-2004, Section 2.26.9.4, systems controlling the same critical safety functions, has been the subject of previous Division analyses, and Board decisions, concerning Otis Skyrise Elevators. In each of these prior matters, it was the recommendation of Division, with concurrence of Board engineering staff, and conclusion of the Board, that the type of ASME A17.1-2013, Section 2.26.9.3.2, compliant control system (as proposed in the present matter), subject to conditions in material conformity with those of the present Decision and Order, would provide for safety equivalent of superior to that of a ASME A17.1-2004, Section 2.26.9.4, compliant control system.
 10. As provided per Title 8, Section 424.1, and as stipulated by the parties (see above Section B.4) The Board takes Official Notice of its decision, and respective Division and Board staff review of application, in the matters of OSHSB Permanent Variance File Nos. 14-V-090, 17-V-064, and 18-V-303. The permanent variances conditionally issued in the afore cited matters, exemplify numerous such previously issued variances providing for utilization of ASME A17.1-2013, Section 2.26.9.3.2, compliant control systems of the type presently proposed—absent known diminution in passenger or worker safety to date.
 11. As to additional foundational evidence and findings concerning the essential safety rating and its indicative nomenclature to be labeled or marked on the subject software system and related circuits, as specified in the below Decision and Order, the Board also takes Official Notice of its Decision, and therein referenced exhibits, in OSHSB Permanent Variance File No. 15-V-397M1.
 12. Both by way of its written evaluation (Exhibit PD-4), and statements at hearing, Division has taken the position that each Applicant’s proposal for permanent variance and means of safety equivalence, subject to conditions in material conformity with those found in the below Decision and Order, will provide safety equivalent to the Title 8 standards from which permanent variance is sought. Further, by way of written evaluation (Exhibit PD-3), and statements at hearing, Board staff concurs with Division in recommending that such conditional grant will provide for safety equivalence.
- D. Conclusive Findings**—The above stated procedural prerequisites, legal authority, and factual findings, as further supported by the documentary record, and hearing testimony in this matter, provide a substantive and reasonable basis of conclusion that:
- (1) each Applicant has complied with the statutory and regulatory requirements that must be met before an application for modification of permanent variance may be conditionally granted, and
 - (2) a preponderance of the evidence establishes that Applicant’s proposal, as below revised and subject to all conditions and limitations set forth in the below Decision and Order, will provide equivalent safety and health to that which would prevail upon

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full compliance with the requirements of California Code of Regulation, Title 8, Elevator Safety Orders from which modified variance is being sought.

E. Decision and Order

Upon adoption of this Decision and Order by the Board, each above Section A.1 table listed Applicant, with respect to the corresponding listed number of conveyances and variance location, is conditionally Granted permanent variance from California Code of Regulations, Title 8, Elevator Safety Order (ESO), Section 3141, incorporated ASME A17.1-2004, Section 2.26.9.4, as per Section 8.7.2.27.4(a), subject to all below enumerated limitations and conditions:

1. The SIL rated software system and its related circuits shall comply with the following:
 - a. The SIL-rated software system and related circuits shall consist of three circuit board components (SSIB, KSIB, and HSIB), each labeled or marked with the SIL rating (not less than SIL 3), the name or mark of the certifying organization, and the SIL certification number (AEB 012, EU-ESD 012 or both) followed by the applicable revision number (as in AEB 012/2, EU-ESD 012/1).
 - b. The software system and related circuits shall be certified for compliance with the applicable requirements of ASME A17.1-2013 Section 2.26.4.3.2.
 - c. The access doors or covers of the enclosures containing the SIL rated components shall be clearly labeled or tagged on their exteriors with the statement:

**Assembly contains SIL rated devices.
Refer to Maintenance Control Program and wiring
diagrams prior to performing work.**

- d. Unique maintenance procedures or methods required for the inspection, tests and replacement of the SIL rated circuits shall be developed and a copy maintained in the elevator machine room. The procedures or methods shall include clear color photographs of each SIL rated component, with notations indicating part identification and location installed.
- e. Wiring diagrams that include part identification, SIL, and certification information, shall be maintained in the elevator machine room.
- f. A successful test of the SIL rated software system and its related circuits shall be conducted initially and not less than annually in accordance with the testing procedure. The test shall demonstrate that SIL rated devices, safety functions, and related circuits operate as intended.

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- g. Alterations to the SIL rated software system and its related circuits shall be made in compliance with the Elevator Safety Orders. If the Elevator Safety Orders do not contain specific provisions for the alteration of SIL rated devices, the alterations shall be made in conformance with ASME A17.1-2013, Section 8.7.1.9.
 - h. Replacement of the SIL rated software system or its related circuits shall be made in compliance with the Elevator Safety Orders. If the Elevator Safety Orders do not contain specific provisions for the replacement of SIL rated devices, the replacement shall be made in conformance with ASME A17.1-2013, Section 8.6.3.14.
 - i. Repairs to the SIL rated software system and its related circuits shall be made in compliance with the Elevator Safety Orders. If the Elevator Safety Orders do not contain specific provisions for the repair of SIL rated devices, the repairs shall be made in conformance with ASME A17.1-2013, Section 8.6.2.6.
 - j. Any space containing SIL rated software or circuits shall be maintained within the temperature and humidity range specified by Otis Elevator Company. The temperature and humidity range shall be posted on each enclosure containing SIL rated software or circuits.
 - k. Field software changes are not permitted. Any changes to the TUV certified SIL rated software will require updated documentation and recertification.
2. The elevator shall be serviced, maintained, adjusted, tested, and inspected only by Certified Competent Conveyance Mechanics who have been trained to, and are competent to, perform those tasks on the elevator system (including SIL 3-rated devices) in accordance with the written procedures and criteria required by Condition D.1(d), and other terms of this permanent variance.
 3. Any Certified Qualified Conveyance Company performing inspections, maintenance, servicing, or testing of the elevators shall be provided a copy of this variance decision.
 4. The Division shall be notified when the elevator is ready for inspection. The elevator shall be inspected by the Division, and a Permit to Operate shall be issued before the elevator is placed in service.
 5. The Applicant shall notify its employees or their authorized representative(s), or both, of this order in the same way and to the same extent that employees and authorized representatives are to be notified of docketed permanent variance applications pursuant to California Code of Regulations, Title 8, Sections 411.2 and 411.3.
 6. This Decision and Order shall remain in effect unless modified or revoked upon application by the Applicant, affected employee(s), the Division of Occupational Safety and Health, or by the Board on its own motion, in accordance with procedures per

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Title 8, Division 1, Chapter 3.5.

Pursuant to California Code of Regulations, Title 8, Section 426(b), the above, duly completed Proposed Decision, is hereby submitted to the Occupational Safety and Health Standards Board for consideration of adoption.

Dated: March 24, 2022



Autumn Gonzalez, Hearing Officer

THE PROPOSED DECISION FOR OSHSB FILE NO. 20-V-357, FRONTIER KEMPER - TUTOR PERINI JOINT VENTURE, WILL BE PROVIDED WHEN IT IS READY FOR THE BOARD'S CONSIDERATION.

Occupational Safety and Health Standards Board

Business Meeting
Legislative Update

Legislative Update
Prepared April 1, 2022 for the April 21, 2022
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SUMMARY OF CHANGES

AB 257 Food facilities and employment. (2021-2022) **NO UPDATE**

AB 1643 Department of Industrial Relations.(2021-2022) **UPDATED**

AB 1733 State bodies: open meetings. (2021-2022) **NO UPDATE**

AB 1775 Occupational safety: live events.(2021-2022) **UPDATED**

AB 1993 Employment: COVID-19 vaccination requirements.(2021-2022) **UPDATED**

AB 2076 Extreme Heat and Community Resilience Program: Extreme Heat Hospitalization and Death Reporting System. (2021-2022) **UPDATED**

AB 2243 Occupational safety and health standards: heat illness: wildfire smoke. (2021-2022) **UPDATED**

SB 831 Entertainment Productions: Firearms: Safety. (2021-2022) **UPDATED**

SB 1102 Occupational safety and health. (2021-2022) **UPDATED**

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AB-257 Food Facilities and Employment. (2021-2022)

(Holden, Carrillo, Low, and Luz Rivas)

Date	Action
2/01/22	In Senate. Read first time. To Com. on RLS. for assignment.
01/31/22	Read third time. Passed. Ordered to the Senate.
01/27/22	Read third time and amended. Ordered to third reading. (Ayes 44. Noes 16.)
01/20/22	Read third time and amended. Ordered to third reading.
01/20/22	Ordered to third reading.
01/20/22	From inactive file.
01/20/22	Assembly Rule 63 suspended. (Ayes 42. Noes 14.)
01/20/22	Assembly Rule 78 suspended. (Ayes 42. Noes 14.)
01/20/22	Assembly Rule 47.1 suspended. (Ayes 42. Noes 14.)

AB-257

Summary:

Enacts the Fast Food Accountability and Standards (FAST) Recovery Act that establishes the Fast Food Sector Council (Council) and tasks the council with conducting a full review every three years on the adequacy of fast food restaurant health, safety, and employment standards and establishing sectorwide minimum health, safety, wage, working hours, and employment standards. Requires a report be provided to the Legislature at least 60 days before a standard is effective.

Major Provisions

- 1) Establishes a Fast Food Sector Council (Council), comprised of 11 members appointed by the Governor, Speaker of the Assembly and Senate Rules Committee, to set sectorwide standards on wages and working conditions in the fast food industry.
- 2) Authorizes the Council to issue standards, rules or regulations to carry out its purpose, and provides that the Council's standards prevail in application to fast food restaurant workers, franchisees and franchisors if there is a conflict with regulations issued by another state agency, except the Division of Occupational Safety and Health (DOSH). The Council

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must review adopted standards every three years and hold public hearings every six months.

3) Requires the Council to recommend standards to OSHSB to protect restaurant worker health and safety, and requires OSHSB to adopt and enforce the Council's recommendations, unless OSHSB finds the recommendation is outside DOSH's statutory authority or unlawful.

4) Grants a cause of action to any fast food restaurant worker discharged, discriminated or retaliated against for exercising their rights, creates a rebuttable presumption of unlawful discrimination or retaliation for any adverse action taken against the worker within 90 days of the franchisor or franchisee having knowledge of the worker exercising their rights and allows the Labor Commissioner (LC) to enforce violations without receiving a complaint.

5) Requires a fast food restaurant franchisor to ensure a franchisee complies with worker and public health laws, including standards issued by the Council. This bill makes a franchisor jointly and severally liable for any penalties or fines for a violation incurred by the franchisee, and provides that any agreement by a franchisee to indemnify the franchisor for liability is contrary to public policy, void and unenforceable.

6) States that nothing in this bill is intended to encroach on the Legislature's ability to establish workplace standards for workers including fast food restaurant workers. The intent of the Legislature is to ensure that legislators have sufficient time to review and take legislative action, if appropriate, with respect to fast food standards promulgated under the bill pursuant to notice-and-comment rulemaking procedures.

7) Provides that a standard, repeal or amendment of a standard shall not take effect until the submission of a report to the Legislature, as specified, that contains the standard, repeal or amendment and the reasons for it.

8) Specifies that the standard, repeal or amendment shall not take effect until at least 60 days have passed from the Legislature's receipt of the Council's report.

9) States that nothing in this bill shall be construed to give the Council the authority to create or amend statutes.

Board staff is monitoring for potential impacts on Board operations.

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AB-1643 ~~Department of Industrial Relations~~ State government: extreme heat: advisory committees. (2021-2022)

(Rivas)

Date	Action
03/28/22	Re-referred to Com. on L. & E.
03/24/22	From committee chair, with author's amendments: Amend, and re-refer to Com. on L. & E. Read second time and amended.
03/24/22	Referred to Com. on L. & E.
01/13/22	From printer. May be heard in committee February 12.
01/12/22	Read first time. To print.

Summary:

AB-1643

~~AB 1643, as introduced, Robert Rivas. Department of Industrial Relations.~~

~~Existing law establishes in the Labor and Workforce Development Agency the Department of Industrial Relations for specified purposes and provides for its administration by the Director of Industrial Relations. Existing law defines the designation "head of the department" to mean the Director of Industrial Relations, unless the Labor Code expressly provides that another entity has jurisdiction over a specific matter.~~

~~This bill would make nonsubstantive changes to that definition.~~

AB 1643, as amended, Robert Rivas. ~~Department of Industrial Relations.~~ State government: extreme heat: advisory committees.

Existing law grants the Division of Occupational Safety and Health, which is within the Department of Industrial Relations, jurisdiction over all employment and places of employment, with the power necessary to enforce and administer all occupational health and safety laws and standards. The Occupational Safety and Health Standards Board, an independent entity within the Department of Industrial Relations, has the exclusive authority to adopt occupational safety and health standards within the state. Under existing law, certain violations of a standard, order, or special order pursuant to these provisions are crimes.

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Existing regulations of the division protect employees in outdoor places of employment from heat illness and prescribe requirements to prevent heat illness from occurring.

This bill would require the division to establish an advisory committee to evaluate its current reporting practices relating to illness and death in the workplace caused by exposure to extreme heat or humidity and to recommend changes to the division's regulations that would ensure accurate reporting of illness and death in the workplace caused by exposure to extreme heat or humidity. The bill would prescribe topics for the committee to consider in evaluating the division's reporting practices and making recommendations, including the best practices to improve education and encourage reporting of health-related illnesses, especially for low-income and uninsured populations. The bill would require the division to adopt the regulatory changes recommended by the committee.

Because a violation of certain safety and health standards or orders constitutes a crime, this bill would impose a state-mandated local program.

Existing law establishes the Employment Development Department (EDD) within the Labor and Workforce Development Agency and designates an executive officer known as the Director of Employment Development to head EDD. Existing law vests the director with the duties, purposes, responsibilities, and jurisdiction over, among other things, job creation activities.

This bill would require EDD to establish an advisory committee to study the effects of extreme heat and humidity on California's workers and economy and to recommend changes to EDD's regulations that would improve the state's understanding of the effects of extreme heat and humidity on California's workers and economy. The bill would prescribe topics for the committee to consider in studying the effects of extreme heat and humidity and making recommendations, including the best practices for conducting data collection on the impacts of extreme heat and humidity on the workforce, businesses, and the economy. The bill would also require the committee to evaluate and publish data on prescribed topics, including the total cost of extreme heat and humidity to California businesses. The bill would require EDD to adopt the regulatory changes recommended by the committee.

The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

The Board is monitoring this bill.

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AB-1733	AB-1733 State Bodies: Open Meetings.(2021-2022) (Quirk)	
	Date	Action
	02/18/22	Referred to Coms. on G.O. and B. & P.
	02/01/22	From printer. May be heard in committee March 3.
	01/31/22	Read first time. To print.
<p><u>Summary:</u></p> <p>AB 1733, as introduced, Quirk. State bodies: open meetings.</p> <p>Existing law, the Bagley-Keene Open Meeting Act, requires, with specified exceptions, that all meetings of a state body be open and public and all persons be permitted to attend any meeting of a state body. The act defines a “meeting” to include any congregation of a majority of the members of a state body at the same time and place to hear, discuss, or deliberate upon any item that is within the subject matter jurisdiction of the state body to which it pertains. The act authorizes teleconferenced meetings under specified circumstances, provided that at least one member of the state body is physically present at the location specified in the notice of the meeting, and all votes taken during a teleconferenced meeting are taken by rollcall. The act provides that if the state body elects to conduct a meeting or proceeding by teleconference, the state body is required to post agendas at all teleconference locations and conduct teleconference meetings in a manner that protects the rights of any party or member of the public appearing before the state body. The act requires each teleconference location to be identified in the notice and agenda of the meeting or proceeding, and each teleconference location to be accessible to the public, and the agenda to provide an opportunity for members of the public to address the state body at each teleconference location.</p> <p>Existing law requires a state body to provide notice of its meeting to any person who requests that notice in writing and to provide notice of the meeting of its internet website at least 10 days in advance of the meeting, as prescribed. Existing law exempts from the 10-day notice requirement, special meetings and emergency meetings in accordance with specified provisions. Existing law authorizes a state body to adjourn any regular, adjourned regular, special, or adjourned special meeting to a time and place specified in the order of adjournment, and authorizes a state body to similarly continue or recontinue any hearing being held, or noticed, or ordered to be held by a state body at any meeting.</p> <p>This bill would specify that a “meeting” under the act, includes a meeting held entirely by teleconference. The bill would require all open meetings to be held by teleconference, would</p>		

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allow for use of teleconference in closed sessions, and would remove existing provisions of the act that require each teleconference location to be identified in the notice and agenda and accessible to the public. The bill would instead require the state body to provide a means by which the public may remotely hear, or hear and observe, the meeting and may remotely address the state body via two-way audio-visual platform or two-way telephonic service, as specified, and would require information to be provided in any notice to the public indicating how the public can access the meeting remotely. The bill would require the state body to provide an opportunity for members of the public to address the state body. The bill would require the state body to provide members of the public a physical location to hear, observe, and address the state body, and would authorize the members of the state body to participate in a meeting remotely or at a designated physical meeting location, and specify that physical presence at any physical meeting location is not necessary for the member to be deemed present at the meeting. The bill would require the agenda to be posted 10 days in advance of the meeting, or as provided in accordance with the provisions applicable to a special or emergency meeting, as well as posted on the state body's internet website and, on the day of the meeting, at any physical meeting location designated in the notice. The bill would also provide that the notice of the meeting is required to specify the means by which a meeting may be accessed by teleconference. The bill would prohibit the notice and agenda from disclosing any information regarding any remote location from which a member is participating, and require members attending a meeting from a remote location to disclose whether any other individuals 18 years of age or older are present in the room, as specified.

If a state body discovers that a means of remote participation, as defined, required by these provisions has failed during a meeting and cannot be restored, the state body would be required to end or adjourn the meeting and take specified actions to notify participants and communicate when the state body intends to reconvene the meeting and how a member of the public may hear audio of, or observe, the meeting.

This bill would remove certain notice provisions specific to advisory bodies of state boards.

Existing law prohibits a state body from requiring, as a condition to attend a meeting, a person to register the person's name, or to provide other information, or to fulfill any condition precedent to the person's attendance.

This bill would exclude from that prohibition an internet website or other online platform that may require identification to log into a teleconference.

Existing law limits the purposes for which a state body is authorized to call a special meeting, including, among others, consideration of disciplinary action involving a state officer or employee and consideration of license examinations and applications.

This bill would add to those purposes deliberation on a decision to be reached in a proceeding required to be conducted pursuant to provisions governing administrative adjudicative proceedings or similar provisions of law.

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	<p>Under existing law, the Department of Consumer Affairs, which is under the control of the Director of Consumer Affairs, is composed of various boards, as defined, that license and regulate various professions and vocations. Existing law requires the boards to meet at least 2 times each calendar year. Existing law requires those boards to meet at least once each calendar year in northern California and once each calendar year in southern California in order to facilitate participation by the public and its licensees.</p> <p>This bill would exempt a board from the requirement to meet in northern and southern California each once a year if the board’s meetings are held entirely by teleconference.</p> <p>This bill would also make conforming changes.</p> <p>This bill would declare the Legislature’s intent, consistent with the Governor’s Executive Order No. N-29-20, to improve and enhance public access to state and local agency meetings during the COVID-19 pandemic and future emergencies by allowing broader access through teleconferencing options.</p> <p>This bill would declare that it is to take effect immediately as an urgency statute.</p> <p>The Board is monitoring this bill.</p>
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AB-1775	AB-1775 Occupational safety: live events. (2021-2022) (Ward)	
	Date	Action
	03/28/22	Re-referred to Com. on L. & E.
	03/24/22	From committee chair, with author's amendments: Amend, and re-refer to Com. on L. & E. Read second time and amended.
	03/24/22	Referred to Com. on L. & E.
	02/04/22	From printer. May be heard in committee March 6.
	02/03/22	Read first time. To print.
<u>Summary:</u>		
AB 1775, as introduced, Ward. Occupational safety: live events.		

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	<p>Existing law establishes the Division of Occupational Safety and Health in the Department of Industrial Relations, and charges the division with the enforcement of various laws affecting safe working conditions, including the California Occupational Safety and Health Act of 1973.</p> <p>This bill would require a contracting entity, as defined, to require an entertainment events vendor to certify for their employees and subcontractors that those individuals have complied with specified training, certification, and workforce requirements, including that employees involved in setting up, tearing down, or the production of a live event at the venue have completed prescribed trainings of the United States Department of Labor’s Occupational Safety and Health Administration. The bill would impose a civil penalty of up to \$1,000 for each serious violation of those provisions, and would require the division to deposit those funds in the Occupational Safety and Health Fund.</p> <p>Existing law, the California Occupational Safety and Health Act of 1973, exists for the purpose of assuring safe and healthful working conditions for all California workers by authorizing the enforcement of effective standards, assisting and encouraging employers to maintain safe and healthful working conditions, and by providing for research, information, education, training, and enforcement in the field of occupational safety and health.</p> <p>This bill would state the intent of the Legislature to enact legislation that would improve occupational safety standards related to staging for live events.</p> <p>The Board is monitoring this bill.</p>
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AB-1993	AB-1993 Employment: COVID-19 vaccination requirements. (2021-2022) (Wicks, Aguiar-Curry, Low, and Akilah Weber)	
	Date	Action
	03/29/22	In committee: Set, first hearing. Hearing canceled at the request of author.
	03/17/22	Referred to Coms. on L. & E. and JUD.
	02/11/22	From printer. May be heard in committee March 13.
	02/10/22	Read first time. To print.

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Summary:

AB 1993, as introduced, Wicks. Employment: COVID-19 vaccination requirements.

Existing law, the California Fair Employment and Housing Act (FEHA), establishes the Department of Fair Employment and Housing within the Business, Consumer Services, and Housing Agency and sets forth its powers and duties relating to the enforcement of civil rights laws with respect to housing and employment.

Existing federal law, the Federal Food, Drug, and Cosmetic Act, authorizes the United States Secretary of Health and Human Services to approve new drugs and products, including vaccines, for introduction into interstate commerce, and authorizes the secretary to authorize vaccines for use in an emergency upon declaring a public health emergency. On February 4, 2020, the secretary determined that there is a public health emergency and declared circumstances exist justifying the authorization of emergency use of drugs and biological products. The secretary subsequently authorized the emergency use of 3 vaccines for the prevention of COVID-19, and on August 23, 2021, the secretary approved a vaccine for the prevention of COVID-19.

The California Emergency Services Act authorizes the Governor to declare a state of emergency during conditions of disaster or extreme peril to persons or property, including epidemics. On March 4, 2020, the Governor declared a state of emergency relating to the COVID-19 pandemic. Pursuant to this authority, the Governor issued several executive orders requiring individuals in specified employment, health care, school, or other settings to provide proof of a COVID-19 vaccination status, unless specified exceptions are met.

This bill would require an employer to require each person who is an employee or independent contractor, and who is eligible to receive the COVID-19 vaccine, to show proof to the employer, or an authorized agent thereof, that the person has been vaccinated against COVID-19. This bill would establish an exception from this vaccination requirement for a person who is ineligible to receive a COVID-19 vaccine due to a medical condition or disability or because of a sincerely held religious belief, as specified, and would require compliance with various other state and federal laws. The bill would require proof-of-vaccination status to be obtained in a manner that complies with federal and state privacy laws and not be retained by the employer, unless the person authorizes the employer to retain proof.

This bill would require, on January 1, 2023, each employer to affirm, in a form and manner provided by the department, that each employee or independent contractor complied with these provisions, and would require the employer to affirm that each new employee or independent contractor is in compliance at the time of hiring or contracting with that person. The bill would require the department to impose a penalty of an unspecified amount on an employer for any violation of these provisions.

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	<p>This bill would repeal these provisions when the federal Centers for Disease Control and Prevention’s Advisory Committee on Immunization Practices determines that COVID-19 vaccinations are no longer necessary for the health and safety of individuals.</p> <p>This bill would include findings that changes proposed by this bill address a matter of statewide concern rather than a municipal affair and, therefore, apply to all cities, including charter cities.</p> <p>This bill would declare that its provisions are severable.</p> <p>Board staff are monitoring this legislation to determine if regulatory action by the Board is called for.</p>								
<p>AB-2076</p>	<p>AB 2076 Extreme Heat and Community Resilience Program: Extreme Heat Hospitalization and Death Reporting System. (2021-2022)</p> <p style="text-align: center;">(Rivas)</p> <table border="1"> <thead> <tr> <th>Date</th> <th>Action</th> </tr> </thead> <tbody> <tr> <td>02/24/22</td> <td>Referred to Coms. on NAT. RES. and HEALTH.</td> </tr> <tr> <td>02/15/22</td> <td>From printer. May be heard in committee March 17.</td> </tr> <tr> <td>02/14/22</td> <td>Read first time. To print.</td> </tr> </tbody> </table> <p><u>Summary:</u></p> <p>(1) Existing law establishes the Office of Planning and Research in state government in the Governor’s office. Existing law establishes the Integrated Climate Adaptation and Resiliency Program (ICARP), to be administered by the office, to coordinate regional and local efforts with state climate adaptation strategies to adapt to the impacts of climate change, as prescribed.</p> <p>This bill would establish the Extreme Heat and Community Resilience Program in the office, to be administered by the office through ICARP, for the purpose of coordinating state efforts and supporting local and regional efforts to prevent or mitigate the impacts of, and reduce the public health risks of, heat. The bill would require the Director of State Planning and Research to appoint a Chief Heat Officer in the office to, among other things, implement the program and establish the Interagency Heat Taskforce, as provided. Upon appropriation by the Legislature, the bill would authorize the program to award grants and provide technical assistance to eligible entities, as defined, for specified projects that support local and regional efforts to mitigate the impacts and reduce the public health risks of heat. The bill would</p>	Date	Action	02/24/22	Referred to Coms. on NAT. RES. and HEALTH.	02/15/22	From printer. May be heard in committee March 17.	02/14/22	Read first time. To print.
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require the office, in the awarding of grants, to prioritize projects that serve disadvantaged or vulnerable communities, as specified, that demonstrate participation in a regional climate collaborative program, or that are a component of a comprehensive heat action plan. The bill would authorize the director to make advance payments, not to exceed 25% of the total award amount, from a grant awarded pursuant to the program. The bill would require the office, in administering the program, to review and consider climate science research and publications, as specified, and to minimize greenhouse gas emissions and electricity grid stress, avoid maladaptation, and maximize job growth and other cobenefits, as provided.

The bill would require the office to draft and adopt guidelines, as provided, for awarding grants pursuant to the program to eligible entities. The bill would require projects awarded a grant to consider, and be informed by, the most recent California Climate Change Assessment. The bill would also exempt procedures, forms, and guidelines established by the office pursuant to program, including the application process, from provisions of the Administrative Procedure Act.

The bill would require the office to draft and adopt guidelines, as provided, for awarding grants pursuant to the program to eligible entities. The bill would require projects awarded a grant to consider, and be informed by, the most recent California Climate Change Assessment. The bill would also exempt ~~procedures, forms, and~~ guidelines established by the office pursuant to ~~program, including the application process,~~ the program from provisions of the Administrative Procedure Act.

The bill would require the office, on or before ~~July 1, 2023,~~ January 1, 2024, and every 2 years thereafter, to ~~prepare~~ update the Extreme Heat ~~Framework~~ Action Plan to promote comprehensive, coordinated, and effective state and local government action on heat, ~~and to update the framework every 2 years,~~ as provided. The bill would also require the office to post the ~~framework~~ plan and subsequent updates on the office's internet website and to provide the ~~framework~~ plan and subsequent updates to the relevant policy and fiscal committees of the Legislature.

(2) Existing law establishes the State Department of Public Health, which is responsible for various programs relating to the health and safety of people in the state, including licensing health facilities, regulating food and drug safety, and monitoring and preventing communicable and chronic diseases.

This bill would require the department, on or before July 1, 2024, upon appropriation by the Legislature, and in consultation with the Chief Heat Officer in the Office of Planning and Research, to establish and maintain the Extreme Heat Hospitalization and Death Reporting System, to assist local interventions and to identify and protect heat-vulnerable or other at-risk populations. The bill would require the department to collect data on hospitalization and death determined to be resultant from extreme heat, as specified, and to post the collected

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	<p>data on its internet website. The bill would require the department to include specified data in the system, including, but not limited to, data identifying neighborhoods or other groups in need of priority intervention.</p> <p>Board staff is monitoring this bill for impacts on the Standards Board.</p>
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AB-2243	AB-2243 Occupational safety and health standards: heat illness: wildfire smoke. (2021-2022)	
	(Garcia)	
	Date	Action
	03/31/22	From committee: Do pass and re-refer to Com. on APPR. (Ayes 4. Noes 2.) (March 30). Re-referred to Com. on APPR.
	03/31/22	Coauthors revised.
	03/22/22	Re-referred to Com. on L. & E.
	03/21/22	From committee chair, with author's amendments: Amend, and re-refer to Com. on L. & E. Read second time and amended.
	03/03/22	Referred to Com. on L. & E.
	02/17/22	From printer. May be heard in committee March 19.
	02/16/22	Read first time. To print.
<p><u>Summary:</u></p> <p>AB 2243, as introduced, Eduardo Garcia. Occupational safety and health standards: heat illness: wildfire smoke.</p> <p>Existing law grants the Division of Occupational Safety and Health, which is within the Department of Industrial Relations, jurisdiction over all employment and places of employment, with the power necessary to enforce and administer all occupational health and safety laws and standards. The Occupational Safety and Health Standards Board, an independent entity within the department, has the exclusive authority to adopt occupational safety and health standards within the state. Existing law, the California Occupational Safety and Health Act of 1973 (OSHA), requires employers to comply with certain safety and health standards, as specified, and charges the division with enforcement of the act. Under OSHA,</p>		

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	<p>certain knowing, negligent, or willful violations of safety and health standards are punishable as a misdemeanor. The existing Maria Isabel Vasquez Jimenez heat illness standard provides for the prevention of heat-related illness of employees in outdoor places of employment, as prescribed. There is also an existing standard for workplace protection from wildfire smoke.</p> <p>This bill would require the division, before January 1, 2024, to submit to the standards board a rulemaking proposal to revise the heat illness standard to include an ultrahigh heat standard for employees in outdoor places of employment for heat in excess of 105 degrees Fahrenheit, as prescribed. prescribed, and require employers to distribute copies of the Heat Illness Prevention Plan, as provided. The bill would similarly require a rulemaking proposal to revise the wildfire smoke standard to reduce the existing air quality index threshold for PM2.5 particulate matter at which control by respiratory protective equipment becomes mandatory. mandatory, and remove the requirement that an employer reasonably anticipate employees may be exposed to wildfire smoke. The bill would require the standards board to review the proposed changes and adopt revised standards before July 1, 2024. The bill would further require the division to consider regulations relating to protections related to acclimatization to higher temperatures, training programs for outdoor employees in administering first aid, and additional protections for piece-rate workers, as provided.</p> <p>Because this bill would require the adoption of additional safety standards, the violation of which would be a misdemeanor, it would impose a state-mandated local program.</p> <p>The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.</p> <p>This bill would provide that no reimbursement is required by this act for a specified reason.</p> <p>Board staff are monitoring this legislation to determine if regulatory action by the Board is called for.</p>
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SB-831	SB-831 Entertainment Productions: Firearms: Safety.(2021-2022) (Cortese)	
	Date	Action
	03/22/22	From committee with author's amendments. Read second time and amended. Re-referred to Com. on L., P.E. & R.

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01/19/22	Referred to Coms. on L., P.E. & R. and JUD.
01/04/22	From printer. May be acted upon on or after February 3.
01/03/22	Introduced. Read first time. To Com. on RLS. for assignment. To print.

Summary:

SB 831, as amended, Cortese. ~~Entertainment~~ *Motion picture productions: firearms: safety: set safety: firearms: ammunition.*

Existing law grants the Division of Occupational Safety and Health, which is within the Department of Industrial Relations, jurisdiction over all employment and places of employment, with the power necessary to enforce and administer all occupational health and safety laws and standards. The Occupational Safety and Health Standards Board, an independent entity within the department, has the exclusive authority to adopt occupational safety and health standards within the state. Existing law, the California Occupational Safety and Health Act of 1973, requires employers to comply with certain standards ensuring healthy and safe working conditions, as specified, and charges the division with enforcement of the act. Other existing law relating to occupational safety imposes special provisions on certain industries and charges the division with enforcement of these provisions.

This bill would ~~prohibit a live gun, functioning gun-like weapon,~~ require a motion picture production employer to hire a qualified set safety supervisor for all motion picture productions to perform an overall risk assessment to be completed prior to the first day of production and to be on set daily to ensure cast and crew are not engaged in or exposed to an environment or activity that puts workers' health and safety at risk. The bill would allow the use of a firearm, a functioning firearm-like device, and blank ammunition containing gunpowder or other explosive charge on ~~entertainment productions for certain purposes, including rehearsal, filming of an on-camera sequence, or other development of content,~~ ~~except~~ motion picture productions only for specified purposes and under specified safety conditions. The bill would require a qualified ~~armorist, prop~~ ~~or~~ armorer, property master, or designee handling a firearm in the course of motion picture production to have completed certain training in firearms and have a specified permit for the ~~use~~ possession and custody of the firearm. The bill would require an employer to document and report to certain entities any incident involving a firearm or blank ammunition that occurs during a film or television production, as prescribed.

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This bill would prohibit ~~live ammunition, as defined, from being permitted~~ ammunition on film, television, and commercial sets, except in ~~limited circumstances, including while filming a reality television project that uses firearms and live ammunition and follows~~ prescribed circumstances, subject to certain safety rules and laws. The bill would require an employer to ensure that any employee responsible for handling, or in proximity ~~to the use of~~ to, firearms on set completes a specific firearm training or equivalent training, as prescribed. The bill would require an employer to comply with the bill and all safety standards adopted by the standards board. The bill would establish exemptions from its provisions for specified registered security guards and ~~peace officers.~~ officers when they are on the perimeter of a set where motion picture production is happening.

This bill would require the division to enforce its provisions and, before July 1, 2023, to propose to the standards board, for its review and adoption on or before January 1, 2024, a standard that protects the health and safety of ~~entertainment~~ motion picture production employees with regard to the storage, handling, and use of firearms, ~~gun-like projectile weapons, and ammunition on set.~~ firearm-like projectile devices, and blanks on set and for use of ammunition. The bill would require the division, in the development of the proposed safety standard, to consider and incorporate, to the extent feasible and consistent with the bill, the provisions of specified joint industry-labor safety bulletins. The bill would establish ~~unspecified~~ civil penalties for specified violations. The bill would define terms for its purposes.

Board staff are monitoring this legislation to determine if regulatory action by the Board is called for.

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SB-1102	SB-1102 Occupational safety and health.(2021-2022) (Glazer)	
	Date	Action
	02/23/22	Referred to Com. on L., P.E. & R.
	02/17/22	From printer.
	02/16/22	Article IV Section 8(a) of the Constitution and Joint Rule 55 dispensed with February 7, 2022, suspending the 30 calendar day requirement.
02/16/22	Introduced. Read first time. To Com. on RLS. for assignment. To print.	
<p><u>Summary:</u></p> <p>SB 1102, as introduced, Glazer. Occupational safety and health.</p> <p>Existing law establishes the Occupational Safety and Health Standards Board within the Department of Industrial Relations as the only agency in the state authorized to adopt occupational safety and health standards. Existing law requires the board, at each of its meetings, to make time available to interested persons to propose new or revised orders or standards appropriate for adoption or other items concerning occupational safety and health. Existing law requires the board to consider a proposed order or standard and reports its decision no later than 6 months following receipt.</p> <p>This bill would require the board to post information on any proposed order or standard on the board’s internet website no later than 5 calendar days following the meeting.</p> <p>Board staff are monitoring this legislation.</p>		

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