



January 15, 2020

Legislative Reference Library
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Re: In the Matter of the Proposed Rules of the Department of Labor and Industry Governing Elevators and Related Devices, Chapter 1307; Revisor's ID Number R-04517

Dear Librarian:

The Minnesota Department of Labor and Industry ("Department") intends to adopt amendments to rules governing Elevators and Related Devices, Minnesota Rules, chapter 1307. The Department plans to publish a Dual Notice in the January 21, 2020, *State Register*.

The Department has prepared a Statement of Need and Reasonableness. As required by Minnesota Statutes, sections 14.131 and 14.23, the Department is sending the Library an electronic copy of the Statement of Need and Reasonableness at the same time we are mailing our Dual Notice.

If you have questions, please email me at amanda.spuckler@state.mn.us or call me at (651) 284-5361.

Very truly yours,



Amanda Spuckler
Rules Specialist
Email: amanda.spuckler@state.mn.us
Phone: (651) 284-5361

Attachment: Statement of Need and Reasonableness

Minnesota Department of Labor and Industry

STATEMENT OF NEED AND REASONABLENESS

Proposed Amendment to Rules Governing Elevators and Related Devices, Minnesota Rules, Chapter 1307; Revisor's ID Number R-04517

INTRODUCTION

The Commissioner of the Minnesota Department of Labor and Industry (“Commissioner”) proposes to amend rules governing elevators and related devices in the Minnesota State Building Code, Minnesota Rules, Chapter 1307.

The Minnesota State Building Code consists of twenty-two separate chapters of Minnesota Rules.¹ Chapter 1307 adopts by reference, with amendments, several standards related to the safe installation, maintenance, and operation of elevators and related devices. The proposed rules incorporate by reference the latest editions of the following American Society of Mechanical Engineers (“ASME”) standards: *ASME A17.1/CSA B44-2016, Safety Code for Elevators and Related Equipment* (“ASME A17.1”); *ASME A17.3-2015, Safety Code For Existing Elevators and Escalators* (“ASME A17.3”); *ASME A17.5-2014, Elevator and Escalator Electrical Equipment* (“ASME A17.5”); *ASME A17.7/CSA B44.7-2007 Performance-Based Safety Codes for Elevators and Escalators* (“ASME A17.7”); *ASME A18.1-2017, Safety Standard for Platform Lifts and Stairway Chairlifts* (“ASME A18.1”); *ASME A90.1–2015, Safety Standard for Belt Manlifts* (“ASME A90.1”); and *ASME B20.1-2015, Safety Standard for Conveyors and Related Equipment* (“ASME B20.1”).

The latest edition of the ASME A17.3 standard, *Safety Code for Existing Elevators and Escalators*, includes a provision requiring existing elevator owners to update or replace their elevator controller units to monitor and prevent the operation of an elevator in the event of faulty door contact circuits if manufactured prior to July 01, 1997, and which have not yet had their controller units updated or replaced since that date.² The Department is proposing to include that provision without amendment. The update or replacement of controller units are necessary to equip those older elevators with a system to monitor and prevent the operation of an elevator with faulty, failed, or manually by-passed door contact circuits. Door contact circuits are intended to prevent the continued automatic ascent or descent of an elevator while the car doors, landing doors, or both are open or ajar. Without a controller system to monitor the actual open or closed position of car doors and landing doors, the circuits can be overridden or fail, falsely indicating to the controller that the elevator doors are closed when they are actually open, and vice versa. The continued operation of the elevator in this circumstance can be hazardous. A person can be caught between one of the sets of doors as the elevator begins to move, becoming

¹ A complete list of the Chapters making up the Minnesota State Building Code can be found at Minnesota Rules, part 1300.0050 (2015).

² Pursuant to ASME A17.1-1996, *Safety Code for Elevators and Related Equipment*, all *new* elevator controllers constructed after July 01, 1997, were and continue to be required to have a system in place to monitor and prevent the operation of an elevator with faulty door contact circuits. That safety requirement was not extended to *existing* elevators until 2015 when ASME determined that the preventative safety measure must apply to existing elevators and controllers as well. See ASME A17.3, section 3.10.12 (2015), attached hereto as “Exhibit D”.

partially trapped between the landing and passenger compartments. Such an occurrence is rare but can result in serious bodily injury or death to the person trapped between compartments. As will be more fully described in both the Department's Regulatory Analysis section and its Rule-By-Rule Analysis section of this Statement of Need and Reasonableness below, the adoption of this provision is reasonable and needed so that all passenger elevators in Minnesota have the same safety features to protect against serious bodily harm or death to passengers, regardless of when they or their controllers were manufactured.

In consultation with the Construction Codes Advisory Council ("CCAC"), the Department of Labor and Industry ("Department") utilized a Technical Advisory Group ("TAG") committee to review existing rule Chapter 1307 and the ASME and ANSI standards to propose reasonable and needed changes to the elevators and related devices provisions of the State Building Code, contained in that rule chapter. The TAG committee members were appointed by the CCAC to review and comment upon the 2018 ICC model codes and relevant standards and proposed changes to the Minnesota State Building Code. The proposed amendments in this rulemaking incorporate changes proposed by Chapter 1307 TAG members and the most recent editions of the ASME standards.

ALTERNATIVE FORMAT

Upon request, this information can be made available in an alternative format, such as large print, braille, or audio. To make a request, contact Amanda Spuckler at the Department of Labor and Industry, 443 Lafayette Road N., St. Paul, Minnesota 55155, phone: 651-284-5006.

STATUTORY AUTHORITY

The Department's statutory authority to adopt these rules is stated in the following Minnesota Statutes:

326B.02, Subdivision 5, General rulemaking authority. The commissioner may, under the rulemaking provisions of chapter 14 and as otherwise provided by this chapter, adopt, amend, suspend, and repeal rules relating to the commissioner's responsibilities under this chapter, except for rules for which the rulemaking authority is expressly transferred to the Plumbing Board, the Board of Electricity, or the Board of High Pressure Piping Systems.

326B.101 Policy and purpose. The State Building Code governs the construction, reconstruction, alteration, and repair of buildings and other structures to which the code is applicable. The commissioner shall administer and amend a state code of building construction which will provide basic and uniform performance standards, establish reasonable safeguards for health, safety, welfare, comfort, and security of the residents of this state and provide for the use of modern methods, devices, materials, and techniques which will in part tend to lower construction costs. The construction of buildings should be permitted at the least possible cost consistent with recognized standards of health and safety.

326B.106, Subdivision 1. Adoption of code. Subject to sections 326B.101 to 326B.194, the commissioner shall by rule and in consultation with the Construction Codes Advisory Council establish a code of standards for the construction, reconstruction, alteration, and

repair of buildings, governing matters of structural materials, design and construction, fire protection, health, sanitation, and safety, including design and construction standards regarding heat loss control, illumination, and climate control. The code must also include duties and responsibilities for code administration, including procedures for administrative action, penalties, and suspension and revocation of certification. The code must conform insofar as practicable to model building codes generally accepted and in use throughout the United States, including a code for building conservation. In the preparation of the code, consideration must be given to the existing statewide specialty codes presently in use in the state. Model codes with necessary modifications and statewide specialty codes may be adopted by reference. The code must be based on the application of scientific principles, approved tests, and professional judgment. To the extent possible, the code must be adopted in terms of desired results instead of the means of achieving those results, avoiding wherever possible the incorporation of specifications of particular methods or materials. To that end the code must encourage the use of new methods and new materials. Except as otherwise provided in sections 326B.101 to 326B.194, the commissioner shall administer and enforce the provisions of those sections.

Under these statutes, the Department has the necessary statutory authority to adopt these proposed rules.

CONSULTATION WITH THE CONSTRUCTION CODES ADVISORY COUNCIL

Minnesota Statutes, section 326B.106, subdivision 1(a), requires the Commissioner to consult with the Construction Codes Advisory Council (“CCAC”) in connection with the adoption of rules, codes, and standards relating to building construction. Minnesota Statutes, section 326B.07, subdivision 1, sets forth the requirements for membership of the CCAC.³ Minnesota Statutes, section 326B.07, subdivision 2, directs the CCAC to review code changes and provide recommendations to the Commissioner on proposed changes to the rule chapters that comprise the Minnesota State Building Code.

As required by statute, the Department consulted with the CCAC in connection with these proposed rules. In consultation with the CCAC, the Department utilized a Technical Advisory Group (“TAG”) to review the existing rule chapter and the 2018 ICC model codes and to comment and propose reasonable and needed changes to Chapter 1307. The Chapter 1307 TAG committee members were appointed by the CCAC and consisted of representatives from the Association of Minnesota Building Officials, Fire Marshals Association of Minnesota, Building Owners and Managers Association, a municipal elevator inspector, and department personnel.⁴ Upon completion of their review, a report detailing their evaluation and recommended changes to existing Chapter 1307 was submitted to the CCAC and reviewed by that council at a public meeting on June 21, 2018.⁵ The council’s comments and recommendations concerning changes to Chapter 1307 were then forwarded to the

³ A complete list of the members of the Construction Codes Advisory Council is attached hereto as “Exhibit A”.

⁴ A complete list of the Chapter 1307 TAG participants is attached hereto as “Exhibit B”.

⁵ A Report detailing all TAG reviews of the 2018 ICC model codes, along with comments from the public and the CCAC, may be found at: <https://www.dli.mn.gov/sites/default/files/pdf/report062618.pdf>.

Commissioner for her consideration in proposing the underlying rule amendments in this rulemaking.

REGULATORY ANALYSIS

Minnesota Statutes, section 14.131, sets out eight factors for a regulatory analysis that must be included in the SONAR. Paragraphs (1) through (8) below quote these factors and then gives the Department's response.

(1) a description of the classes of persons who probably will be affected by the proposed rule, including classes that will bear the costs of the proposed rule and classes that will benefit from the proposed rule

The classes of persons who will probably be affected by the proposed rule include: municipal elevator inspectors who must become familiar with and enforce the rule and code; elevator and related devices contractors and installers who must become familiar with and incorporate the provisions of the rule and code; elevator and related devices equipment manufacturers and suppliers who must become familiar with and apply the rule and code to the manufacture and assembly of products; and the general public that uses elevators and related devices in buildings and other structures. The general public expects that all passenger elevators, regardless of the year of manufacture, have the same safety features to prevent serious bodily injury or death to passengers.

The classes of persons who will probably bear the costs of the proposed rule include: building owners and managers who pay for the initial installation costs and maintenance costs for elevators and related devices; elevator and related devices contractors and installers who bear short term costs associated with estimating and purchasing equipment and labor; and equipment manufacturers and suppliers who will bear short term costs of any provisions that affect costs for manufacture of elevators and related devices. Many of these costs, however, are passed on to the building owners who ultimately bear the costs, then pass them on to consumers.

The classes of persons who will probably benefit from the proposed rule include: elevator inspectors who need the most current available standards to provide the most current technologies and methodologies and to provide more uniform application and enforcement; elevator and related devices contractors and installers who need to use the most current standards available to remain consistent with requirements in use throughout the nation; elevator and related devices equipment manufacturers and suppliers who use and apply the most current standards available; building owners and managers who require updated and uniform rules and codes to ensure safe equipment at the lowest cost; and the general public who will be protected physically and financially with current codes and standards.

(2) the probable costs to the agency and to any other agency of the implementation and enforcement of the proposed rule and any anticipated effect on state revenues

The probable costs to the Department to implement and enforce the proposed rule are negligible. As will be seen in number five (5) of the Regulatory Analysis section below, the

proposed rules do include requirements for some existing elevator owners to update or replace their elevator controller units if manufactured before July 01, 1997, and which have not yet had their controller units updated or replaced since that date. The replacement of these controller units will require the expenditure of funds for those elevator owners, but the proposed rules also provide those owners the ability to delay compliance with the proposed rules for up to five-years upon filing a “compliance plan” with the authority having jurisdiction.⁶ Because of the potential costs of compliance with the proposed rules for some owners of existing elevators, the Department anticipates submissions of compliance plans from those owners to delay compliance with the proposed rules for the five-year period provided for in the proposed rule. However, authorities having jurisdiction already have existing controls and systems to record and monitor compliance plans or exemptions, to provide notification to owners of existing elevators of the requirement, and to inspect existing elevators to verify compliance. Therefore, the Department’s costs in implementing and enforcing the proposed rules are negligible.

The other probable costs to the Department to implement and enforce the proposed rule are also negligible. The Department must purchase and review the newest codes and standards incorporated into the rule. The Department may provide updates or minor training to the industry regarding some of the new elevator provisions in the code. This would likely be accomplished by sending out an update or by including a small segment of elevator education within a larger training program for that target audience.

Finally, there would be no anticipated effects on state revenue associated with the proposed rule.

(3) a determination of whether there are less costly methods or less intrusive methods for achieving the purpose of the proposed rule

The agency's statutory authority requires the code to conform insofar as practicable to model codes generally accepted and in use throughout the United States. The best way to achieve this result is to incorporate by reference those recognized national model codes and standards into rule. Given this requirement, there would be no more efficient or less intrusive means to adopt an elevator code for Minnesota. Drafting an elevator code from scratch would be far more costly and would increase the risk of inconsistent application and enforcement when compared to the rest of the Midwest region and the nation. Much of the construction industry conducts business on a national scale and for that reason, benefits from the use of nationally recognized standards to conduct business.

(4) a description of any alternative methods for achieving the purpose of the proposed rule that were seriously considered by the agency and the reasons why they were rejected in favor of the proposed rule

⁶ See proposed Minnesota Rules, part 1307.0090, subpart 7 (Compliance Schedule for Existing Installations), described in the Rule-By-Rule Analysis section below. The term “authority having jurisdiction” is defined in Minnesota Rules, part 1307.0027, subpart 9, as “the Department of Labor and Industry pursuant to Minnesota Statutes, section 326B.106, or a unit of local government pursuant to Minnesota Statutes, sections 326B.106 and 326B.184.”

The agency's statutory authority requires the code to conform insofar as practicable to model codes generally accepted and in use throughout the United States. The best way to achieve this result is to incorporate by reference those recognized national model codes into rule. There are no alternative elevator codes or standards available to consider for adoption. The ASME and ANSI technical standards for elevators and related devices are the only standards available for use in the United States. As a result, the ASME and ANSI standards were the only standards considered, reviewed and amended in this proposed rule.

(5) the probable costs of complying with the proposed rule, including the portion of the total costs that will be borne by identifiable categories of affected parties, such as separate classes of governmental units, businesses, or individuals

As noted in the Rule-By-Rule Analysis section below, the Department proposes to incorporate by reference the most recent Safety Code for Existing Elevators and Escalators, ASME A17.3-2015, in Minnesota Rule, part 1307.0020, subpart 1. As further noted in that analysis, section 3.10.12 of the ASME standard requires that all existing elevators be equipped with a controller system to monitor and prevent automatic operation of an elevator in the event of door contact circuit failures or bypasses. All new elevator controllers manufactured on or after July 01, 1997, have been required by the ASME A17.1 Safety Code for Elevators and Escalators to have a built-in controller system to monitor and prevent automatic operation of an elevator with faulty door contact circuits. Such a system prevents the elevator from operating when the car doors and landing doors are not mechanically coupled and decreases the risk of serious bodily injury or death to elevator passengers and maintenance workers. However, that system requirement was not extended to existing elevators until the American Society of Mechanical Engineers published section 3.10.12 of the ASME A17.3 Safety Code for Existing Elevators and Escalators in 2015, which is now being proposed for incorporation into Minnesota Rules, Chapter 1307. The Department estimates that out of the 20,729 passenger elevators currently licensed in the state of Minnesota, approximately 6,713 of those existing elevators will need to have their controller units updated or replaced to comply with the standard proposed for adoption in this rulemaking.

The Department has further determined that an update or replacement of an existing elevator controller unit to meet the requirements of the ASME A17.3-2015 standard will entail a cost to owners of those existing elevators and controller units. The actual cost of that update or replacement will depend on many factors, including the number of elevators present in the building, the number of controller units serving those elevators, the general age and condition of the elevators, and the overall cost of labor and materials. The average cost for a Minnesota elevator contractor to obtain a new replacement controller unit is approximately \$8,900 and an update overlay for an existing elevator controller unit will cost approximately \$5,700; however, there are significant labor costs for the installation of a replacement controller unit or for updating an existing unit with an overlay. The replacement or update of an existing controller unit requires a team of two elevator constructors at an average labor cost of \$330 per hour. The replacement or update may require one to four weeks to complete, depending on the height of the building, the number of elevators in the building, the age and condition of those elevators and their existing controller units, and other factors. The average total cost to replace a controller unit in an existing elevator is estimated to be approximately \$36,000, while the average total cost for

updating an existing elevator with a controller overlay is approximately \$25,500.⁷ Although it can be costly to update or replace an existing elevator controller unit, it is necessary for public safety to ensure that all elevators in Minnesota are equipped with the same safety feature to prevent serious bodily injury or death to elevator passengers in the event elevator door contact circuits are faulty and the doors are not mechanically coupled.

Finally, the Department has determined that the cost of compliance with the other provisions for elevators and related devices located in either ASME A17.1-2016 or ASME A17.3-2015 will have no significant cost impact, if any. Similarly, the costs of compliance with the other ASME and ASNI standards incorporated by reference in the proposed rules will not exceed \$25,000. New elevators and related devices are manufactured in compliance with the most recent edition of the applicable ASME standards. Building to the latest ASME standards tends to lower costs because the manufacture of elevators and related devices is standardized globally, rather than being manufactured or tailored to a specific code enforced in a particular jurisdiction. As will be seen by the Rule-By-Rule Analysis below, some of the other new provisions have a negligible cost impact but incorporate life safety protections where none actually existed before, and are, therefore, very necessary to adequately protect the public and industry personnel.

(6) the probable costs or consequences of not adopting the proposed rule, including those costs or consequences borne by identifiable categories of affected parties, such as separate classes of government units, businesses, or individuals

If the agency does not adopt the proposed rule, it will have to fall back on older standards that may be outdated and not include all necessary provisions for the safe installation, operation, and use of elevators and related devices. For example, the standard for existing elevators currently in use in Minnesota does not require existing elevators to be equipped with a system to monitor and prevent automatic operation of an elevator with faulty door contact circuits. The probable cost of not adopting the proposed rule part is an existing elevator with faulty door contact circuits that may operate or continue to operate with doors that do not operate synchronously. As seen in other states, it is possible that the operation of an elevator under such circumstances may result in death or serious bodily injury to an elevator passenger or constructor.

Additionally, the current referenced standards in the existing rule chapter are generally outdated and contain provisions that are difficult to comply with because the required equipment or materials may no longer be available or methods and processes may no longer be used by the industry. Adopting new technologies and methodologies in chapter 1307 will tend to decrease costs by encouraging efficiency and using less expensive materials and processes. In addition to failing to address necessary life-safety issues, failure to adopt the updated standards may also result in keeping industry costs higher than necessary.

⁷The cost estimates discussed above were arrived at by the Department's survey of licensed elevator contractors in the state of Minnesota. Both labor and material costs varied significantly from contractor to contractor, all of who emphasized that the reported costs were estimated costs due to the wide variety of factors that can affect either replacement or update of existing elevator controller units.

(7) an assessment of any differences between the proposed rule and existing federal regulations and a specific analysis of the need for and reasonableness of each difference

There are no applicable federal regulations that address elevator safety in the construction of non-federally owned buildings. The federal government does prescribe standards for persons with disabilities in all public use buildings, including those with elevators. These proposed rules, however, refer to the Minnesota Accessibility Code for accessibility issues, which mirror federal regulations with regard to accessibility.

(8) an assessment of the cumulative effect of the rule with other federal and state regulations related to the specific purpose of the rule. . . . '[C]umulative effect' means the impact that results from incremental impact of the proposed rule in addition to other rules, regardless of what state or federal agency has adopted the other rules. Cumulative effects can result from individually minor but collectively significant rules adopted over a period of time.

The Minnesota State Building Code is a single set of coordinated building construction regulations that apply throughout the state of Minnesota. There are no other building codes that can be used or enforced in this state. When the Department adopts the individual rules that make up the State Building Code it works with other state agencies that may also have an effect on certain buildings to ensure that the requirements that are parallel or that cover the same building type are not cumulative.

For example, portions of Minnesota Rules, chapter 1305, Adoption of the International Building Code, regulates the planning and construction of care facilities in Minnesota. Similar to the underlying procedure used to review the existing Elevator Code, the Department utilized a Technical Advisory Group to review existing Minnesota rule chapters and the 2018 International Building Code. The Technical Advisory Group members included technical expertise from other state agency personnel to ensure the rule would coordinate with any other state regulations that may be affected by the rule.

The adoption cycle for both the national model codes and the Minnesota State Building Code occurs every six years, so they are current and reflect the most recent changes that occur federally and with other state agencies. For example, the federal Department of Energy implements federal requirements for energy in construction by working through the model code process; by basing Minnesota's rules on the same model codes, the cumulative effect is thereby eliminated. Department staff also monitor any regulatory changes that occur federally and on a state level. The Department also has staff that monitor code changes being proposed to the model building codes at the national level to ensure that the Minnesota State Building Code will not unnecessarily conflict with other building code regulations.

PERFORMANCE-BASED RULES

Minnesota Statutes, section 326B.106, subdivision 1, authorizes the Department to establish by rule a code of standards for construction. This statute requires the code to "conform insofar as practicable to model building codes generally accepted and in use throughout the United States." At the same time, this statute mandates that, "to the extent possible, the code

must be adopted in terms of desired results instead of the means of achieving those results, avoiding wherever possible the incorporation of specifications of particular methods or materials." The Minnesota State Building Code establishes minimum regulations for building systems using mostly prescriptive and performance-based provisions, with emphasis on performance. This proposed rule chapter provides direction for its administration, enforcement, and compliance utilizing the performance-based philosophy established in Minnesota Statutes, section 326B.106, subdivision 1.

ADDITIONAL NOTICE

This Additional Notice Plan was reviewed by the Office of Administrative Hearings and approved in a January 9, 2020 letter by Administrative Law Judge Eric L. Lipman.

Our Notice Plan also includes giving notice required by statute. We will mail or email the Notice of Intent to Adopt/Dual Notice, which will contain an easily readable and understandable description of the nature and effect of the proposed rule, to everyone who has registered to be on the Department's rulemaking mailing list under Minnesota Statutes, section 14.14, subdivision 1a. We will also give notice to the Legislature per Minnesota Statutes, section 14.116.

We will also send by mail or email the Dual Notice to the following interested parties:

- a. All municipal code officials and others involved in code administration. This list includes all municipal building officials responsible for administration of the Minnesota State Building Code.
- b. Elevator Association of Minnesota
- c. National Association of Elevator Contractors
- d. National Elevator Industry, Inc.
- e. Building Owners and Managers Association
- f. American Institute of Architects - Minnesota
- g. Minnesota Society of Professional Engineers
- h. State Fire Marshal Division
- i. Minnesota State Fire Chief's Association
- j. League of Minnesota Cities
- k. Association of Minnesota Counties
- l. Minnesota Association of School Administrators
- m. Minnesota Association of School Maintenance Supervisors
- n. Minnesota Department of Education
- o. Community Associations Institute – Minnesota Chapter
- p. Care Providers of Minnesota
- q. Minnesota Hospital Association

Our Notice Plan did not include notifying the Commissioner of Agriculture because the rules do not affect farming operations per Minnesota Statutes, section 14.111.

CONSULTATION WITH MMB ON LOCAL GOVERNMENT IMPACT

As required by Minnesota Statutes, section 14.131, the Department consulted with the Commissioner of Minnesota Management and Budget ("MMB") concerning the fiscal impact and benefits the proposed rules may have on units of local government. This was done on November 26, 2019 by providing MMB with copies of the Governor's Office Proposed Rule and SONAR Form, the proposed rules, and the near-final SONAR. On January [date], 2020 the Department received a memorandum dated that same date from MMB Executive Budget Officer Kwesi Pasley which provided general comments and conclusions concerning local government impact consistent with those noted by the Department in the cost impact sections of the Regulatory Analysis section above and the Department's determination of small city and small business compliance costs below.⁸

DETERMINATION ABOUT RULES REQUIRING LOCAL IMPLEMENTATION

Pursuant to Minn. Stat. § 14.128, the Department has determined that a local government will not be required to adopt or amend an ordinance or other regulation to comply with these proposed rules. The State Building Code is the standard that applies statewide. Minn. Stat. § 326B.121, subdivision 1, mandates compliance with the State Building Code whether or not a local government adopts or amends an ordinance. As a result, an ordinance or other regulation is not required for compliance. If a city wishes that its ordinances accurately reflect legal requirements in a situation in which the Code has superseded the ordinances, then the city may want to amend or update its ordinances.

COST OF COMPLYING FOR SMALL BUSINESS OR CITY

Agency Determination of Cost

As required by Minnesota Statutes, section 14.127, the Department has considered whether the cost of complying with the proposed rules in the first year after the rules take effect will exceed \$25,000 for any small business or small city.⁹ As noted in the Department's response to paragraph number 5 of the Regulatory Analysis section above, the Department has determined that the cost of complying with the proposed rules may exceed \$25,000 for some businesses and cities that own existing elevators whose controller units were manufactured prior to July 01, 1997, and which have not since been updated to comply with the ASME A17.3-2015 safety standard for existing elevators. A system to monitor and prevent automatic operation of an elevator with faulty door contact circuits can be added to an existing elevator by updating or replacing its controller system to comply with the proposed incorporation of the standard. Whether that repair or replacement will exceed \$25,000 or not will depend on many factors, including the number of elevators present in the building, the number of controller units serving those elevators, the general age and condition of the elevator, and the overall cost of labor and materials.

⁸ A copy of MMB's local government impact analysis is attached hereto as "Exhibit C".

⁹ For purposes of Minnesota Statutes, section 14.127, "Small Businesses" are defined as any one business that has less than 50 full-time employees" and "Small Cities" are defined as "any one statutory or home rule charter city that has less than 10 full-time employees." See [Minnesota Statutes, section 14.127, subdivision 1 \(2005\)](#).

Assuming that the \$25,000 threshold of Minnesota Statutes, section 14.127, is met and a small business or small city needs to replace or update its elevator controller units to comply with the proposed rule, nothing in the proposed rule requires a small business or small city to comply with the rule “in the first year after the rule takes effect,” as required by Minnesota Statutes, section 14.127, subdivision 1 (2018). Instead, the business or city will have five-years to comply with the rule requirement upon notification of the same by the Department or the authority having jurisdiction. *See* proposed Minnesota Rules, part 1307.0090, subpart 7, Compliance Schedule, discussed in the Rule-By-Rule Analysis section below. While the Department is mindful of the public safety concerns being addressed by the proposed rule, the Department also recognizes the potential cost impact of compliance with elevator code changes affecting all owners of existing elevators and is proposing to amend Minnesota Rules, part 1307.0090, subpart 7, to provide for a five-year compliance period beginning upon notification to the elevator owner of the requirement by the Department or the authority having jurisdiction and the filing of a compliance plan by the elevator owner. The Department cannot require any entity of any size to comply with the new standards incorporated by proposed Minnesota Rules, part 1307.0020, subpart 1, within the first year after the rule takes effect. Therefore, the Department has determined that the requirements of Section 14.127 and the exemptions therein for small businesses and cities do not apply.

Finally, while the Department is mindful of the potential cost impact of the proposed rule on some small businesses and cities, it is also important to note that the purpose of the regulation is to promote building safety and to prevent the potential for serious bodily injury or death by an outdated elevator that lacks a controller system to monitor and prevent automatic operation of an elevator with faulty door contact circuits. Whether the existing elevator owner is a small, medium, or large business or city should make little difference when a regulation is proposed to protect the public against avoidable physical harm or death from a known design defect in existing elevators. Nevertheless, the Department believes that the available delay in regulatory compliance for existing elevator owners proposed in part 1307.0090, subpart 7, sufficiently mitigates the potential cost impact of the necessary controller repairs or upgrades needed to be completed by some small businesses and cities.

LIST OF WITNESSES

If these rules go to a public hearing, the Department anticipates having the following witnesses testify in support of the need for and reasonableness of the rules:

1. Staff from the Department of Labor and Industry, if necessary.

RULE-BY-RULE ANALYSIS

GENERAL. In numerous locations throughout the proposed rule chapter, references to the editions of the various incorporated codes or standards are modified to reflect the most current editions of the code or standard that is proposed for incorporation. These changes are necessary to ensure the proper edition of the code is being referenced and incorporated into the rule. The following are the current editions of the codes or standards proposed for incorporation:

Safety Code for Elevators and Escalators, ASME A17.1/CSA B44-2010 is being replaced with ASME A17.1/CSA B44-2016;

Safety Code for Existing Elevators and Escalators, ASME A17.3-2011 is being replaced with ASME A17.3-2015;

Elevator and Escalator Electrical Equipment, ASME A17.5-2011 is being replaced with ASME A17.5-2014;

Safety Standard for Platform Lifts and Stairway Chairlifts, ASME A18.1-2011 is being replaced with ASME A18.1-2018;

Safety Standard for Belt Manlifts, ASME A90.1-2009 is being replaced with ASME A90.1-2015; and

Safety Standard for Conveyors and Related Equipment, ASME B20.1-2009 is being replaced with ASME B20.1-2015.

The ASME Codes and Standards are published by the American Society of Mechanical Engineers, 2 Park Avenue, New York, New York, 10016.

Modifications are made throughout the rule chapter to reflect the most current editions of the codes and standards referenced in the rule.

1307.0020 CODES AND STANDARDS ADOPTED BY REFERENCE.

Subpart 1. This subpart is amended to reflect the latest edition of the incorporated codes and standards for elevators and related devices and the name and address of the publisher of the codes or standards that are referenced throughout the rule chapter. These changes are necessary to ensure that updated Codes and Standards are properly incorporated into and referenced throughout the proposed rule. The rule has been reformatted to list the codes or standards as subitems. This formatting modification is reasonable and necessary to assist in the overall ease of use, reading, and citation to the rule.

The incorporation by reference of chapter 30 of the International Building Code (“IBC”) is deleted from this subpart and a reference to chapter 1305 of the Minnesota State Building Code and its amendments to IBC chapter 30 is being added to a new subpart 4, “Building Code Elevator and Conveying Systems Provisions.” The incorporation of chapter 30 by reference is deleted because the IBC, including chapter 30 and corresponding Minnesota amendments, is currently being proposed for incorporation by reference in Minnesota Rules, chapter 1305, Adoption of the International Building Code. The incorporation by reference of IBC chapter 30, including Minnesota amendments, in existing chapter 1307 has caused confusion for some designers, elevator constructors, building officials, and municipal elevator inspectors because chapter 30 is a part of the IBC, yet the amendments to it were found in Minnesota Rules, chapter 1307. Chapter 30 addresses general system requirements for buildings equipped with elevators, such as provisions for egress requirements, fire and smoke protection, and emergency occupant

evacuation. The ASME standards incorporated by reference in Minnesota Rules, chapter 1307, address specific technical requirements for the machinery and operation of elevators and related devices. To alleviate confusion, promote ease of use, and avoid duplicity, it is reasonable to adopt IBC chapter 30 as amended by Minnesota Rules chapter 1305, as opposed to adopting IBC chapter 30 herein and reproducing amendments to that chapter's general system requirements within the technical requirements of chapter 1307.

The proposed rule also incorporates by reference the Performance-Based Safety Codes for Elevators and Escalators, ASME A17.7/CSA B44.7-2007, because it is a performance-based and reasonable alternative to the more prescriptive requirements of the Safety Code for Elevators and Escalators, ASME A17.1/CSA B44, which remains incorporated by reference in the proposed rules. The performance standard, ASME A17.7/CSA B44.7, has been and continues to be acceptable for use in Minnesota because it a standard referenced and supported by ASME A17.1/CSA B44. The incorporation of that performance standard into the proposed rule is reasonable and needed to encourage regulatory safety innovation and to clarify that ASME A17.7/CSA B44.7 is acceptable for use in Minnesota.

Finally, the proposed rule incorporates by reference ASME A17.3-2015, the Safety Code for Existing Elevators and Escalators. Like the existing ASME A17.1 safety code standard for newly built elevators, the 2015 version of the ASME A17.3 safety standard for existing elevators now contains a section that addresses the safety hazards associated with the automatic operation of elevators with faulty or bypassed door contact circuits and extends that protection to existing elevators.

The American Society of Mechanical Engineers published ASME A17.1 in 1996 in part to prevent newly built elevators from being operated between floors if their elevator doors and contact circuits are not fully closed and engaged.¹⁰ The operation of an elevator with faulty door contact circuits can obviously be hazardous to life and limb. Door contact circuits are intended to prevent the continued automatic ascent or descent of an elevator while the car doors, landing doors, or both are open. Without a controller system to monitor and prevent the automatic operation of an elevator with faulty door contact circuits, a person can be partially trapped between the landing and passenger compartment as the elevator car begins to move between floors, resulting in serious bodily injury or death.

While new elevators manufactured on or after July 01, 1997, are required by the ASME A17.1 safety standard to have a built-in controller system to monitor and prevent automatic operation of an elevator with faulty door contact circuits, existing elevators manufactured prior to the effective date of that standard were not included. Following a series of elevator accidents resulting in serious injuries and deaths to passengers caught between elevator doors during operation of existing elevators not equipped with the preventative system, the American Society of Mechanical Engineers updated the Safety Code for Existing Elevators and Escalators, ASME A17.3, in 2015 to include the requirement that all existing elevators be equipped with a system to

¹⁰ While ASME A17.1-1996 was issued and published on December 31, 1996, its effective date was July 01, 1997. Elevator manufacturers build elevators and their mechanical components to the latest applicable ASME standards. Accordingly, elevators and their safety controller systems manufactured on or after July 01, 1997, are already equipped to prevent automatic operation of the same with faulty door contact circuits.

monitor and prevent automatic operation of an elevator with faulty door contact circuits.¹¹ See ASME A17.3-2015, section 3.10.12, reproduced and attached hereto as “Exhibit C”.

The failure of existing elevator door contact circuits is rare; nevertheless, a system to prevent the automatic operation of an elevator with faulty door contact circuits is available and significantly reduces or eliminates the risk of accidents resulting in serious bodily injury or death. Door contact circuits can fail for a number of reasons, including mechanical problems, electrical issues, or even human error in the maintenance or repair of the same. Older elevators lacking a system to prevent operation if the door contact circuits are faulty or not fully engaged are particularly at risk of an accident occurring due to aging equipment that requires more maintenance and repair. Additionally, elevator maintenance workers sometimes disable and bypass the door contact circuits manually to complete maintenance and repairs, thus increasing the risk to both themselves and passengers if the circuits are not correctly enabled immediately following those repairs. Compliance with A17.3-2015, section 3.10.12, is intended to prevent incidents occurring due to faulty or bypassed door contact circuits and may be had by updating or replacing the existing elevator’s controller unit, an electromechanical system that acts as the elevator’s “brain” by using relay-logic circuits or microprocessor-based controls to control the speed, position and door operation of an elevator. The new or updated controller unit is designed to prevent any operation of an existing elevator while the doors are open or ajar, even if other safety circuits designed to prevent operation are burnt out, damaged, bypassed, or otherwise rendered non-operational.

In light of the potentially serious consequences of operating an existing elevator without a system to monitor and prevent its automatic operation with faulty or bypassed door contact circuits, the proposed incorporation of ASME A17.3-2015, section 3.10.12, is reasonable and needed to protect the health and safety of the public who reasonably expect that all passenger elevators, regardless of their age or condition, are equipped with up-to-date technology and system mechanisms designed to prevent serious bodily injury or death due to worn, faulty, or bypassed door contact circuits.

Subp. 4. This new subpart refers the code user to Minnesota Rules, chapter 1305, which incorporates chapter 30 of the IBC by reference, with Minnesota amendments. As noted in subpart 1 above, chapter 30 of the IBC contains general provisions for elevator and conveying systems, addressing requirements for construction of a building containing an elevator or related device, including requirements for life-safety such as the evacuation of building occupants and fire safety features. Chapter 1307 and its incorporated ASME and ANSI standards address

¹¹ For example, on December 14, 2011, in New York City, advertising executive [Suzanne Hart](#) was killed when she was trapped between elevator doors as an elevator continued its ascent despite her body preventing the door contact circuits from being fully engaged. Also, in New York City, [Debra Jordan](#) sustained serious bodily injury in 2010 when she was dragged seven floors with her arm and leg hanging outside of an elevator car with faulty door contact circuits and no system to prevent the automatic operation of the same under those conditions. Another high-profile death due to the absence of an elevator door lock monitoring device on an existing elevator occurred on August 16, 2003, at the Christus St. Joseph Hospital in Houston, Texas, where Dr. [Hitoshi Nikaidoh](#) was decapitated as he was trapped between doors of an ascending elevator that lacked a controller system that could have prevented the accident. Other examples of bodily harm and death due to the lack of a system to monitor and prevent automatic operation of an existing elevator with faulty door contact circuits exist throughout the country, but the three examples noted above are the most commonly cited to when discussing the need for ASME A17.3-2015’s requirements for existing elevators.

specific technical requirements for the machinery and operation of elevators and related devices. A reference to IBC chapter 30, as amended by Minnesota Rules, chapter 1305, within this chapter is reasonable and needed to provide the code user with direction to the correct location of those provisions within the State Building Code.

1307.0027 DEFINITIONS.

Subparts 2 through 4. See the “GENERAL” statement at the beginning of the Rule-by-Rule Analysis section of this SONAR.

Subpart 4a. This new subpart adds the definition for a new referenced standard ASME A17.7/CSA B44.7-2007. See part 1307.0020, subpart 1, above, for a full explanation of this standard and statement of need and reasonableness.

Subparts 5 through 7. See the “GENERAL” statement at the beginning of the Rule-by-Rule Analysis section of this SONAR.

Subparts 8 through 11 remain unchanged.

Subparts 12 and 13. See the “GENERAL” statement at the beginning of the Rule-by-Rule Analysis section of this SONAR.

Subpart 14. This subpart is being amended to reflect the current, proposed effective date for Chapter 1307, March 31, 2020, so that buildings in existence at the time of the proposed effective date can accurately be considered “existing installations” for purposes of this code.

Subparts 15 through 17 remain unchanged.

Subpart 18. See the “GENERAL” statement at the beginning of the Rule-by-Rule Analysis section of this SONAR.

1307.0030 PERMITS.

Subpart 1. Permits required. See the “GENERAL” statement at the beginning of the Rule-by-Rule Analysis section of this SONAR. This subpart is also amended by replacing “rope fastenings and hitch plates” with “suspension means fastenings and hitch plates” to reflect the change in the title of section 8.6.3.3 in the 2016 edition of the ASME A17.1/CSA B44 standard.

Subparts 2 and 3 remain unchanged.

Subparts 4 and 5. See the “GENERAL” statement at the beginning of the Rule-by-Rule Analysis section of this SONAR.

1307.0035 INSPECTION, TESTS, AND APPROVALS.

Subparts 1 and 2 remain unchanged.

Subpart 3. Approval. See the “GENERAL” statement at the beginning of the Rule-by-Rule Analysis section of this SONAR.

Subpart 4 remains unchanged.

1307.0047 SPECIAL PROVISIONS.

Subparts 1 and 2. See the “GENERAL” statement at the beginning of the Rule-by-Rule Analysis section of this SONAR.

Subpart 3 remains unchanged.

Subpart 4. See the “GENERAL” statement at the beginning of the Rule-by-Rule Analysis section of this SONAR.

Subparts 5 through 7 remain unchanged.

Subpart 8. All work required for compliance with ASME A17.1/CSA B44-2010 8.6.5.8 Safety Bulkhead [REPEAL]. This subpart is being repealed because the date set as a deadline for compliance with ASME A17.1/CSA B44-2010, section 8.6.5.8, has passed. Subpart 8 was added during the 2006 update of Chapter 1307 to allow elevator owners five years from the effective date of the rule for compliance with the requirements of section 8.6.5.8 of the 2004 edition of ASME A17.1, Safety Code for Elevators and Related Equipment (“ASME A17.1-2004”). During the 2012 update of Chapter 1307, this subpart was amended to require compliance with ASME A17.1/CSA B44-2010, section 8.6.5.8. Section 8.6 is the maintenance section of the 2004, 2010, and 2016 editions of ASME A17.1 and its provisions apply to both new and existing elevators. *See* ASME A17.1/CSA B44-2016, section 8.6.1.1.2. Section 8.6.5.8 requires any new or existing elevator without a safety bulkhead to have one installed or be equipped with either rail safeties or a plunger gripper.

Hydraulic elevators operate by forcing pressurized oil through a valve into a steel cylinder. Safety bulkheads prevent the rapid release oil if the cylinder fails. The rapid release of oil could cause the uncontrolled descent of the elevator car, posing a life safety risk to passengers. A plunger gripper or rail safeties are safety mechanisms that prevent an elevator car from descending rapidly in the event of cylinder failure. Due to the expense of installing a safety bulkhead or equipping an elevator with rail safeties or a plunger gripper, subpart 8 allowed five years from the effective date of the rule, January 29, 2007, for compliance.

Subpart 8 also required an annual submission of a notarized statement that the oil usage log was utilized and the elevator had successfully passed the annual tests required by ASME A17.1-2004, and later ASME A17.1/CSA B44-2010. Oil usage can indicate problems with the cylinder so it was necessary to monitor oil usage and perform annual tests to verify the cylinder

continued to function correctly and did not pose an immediate life safety risk that would require an immediate repair.

The work necessary for compliance with ASME A17.1/CSA B44-2010, section 8.6.5.8, was to be completed by January 29, 2012. This was superseded by Minnesota Statutes, section 326B.188, requiring compliance with this requirement by January 29, 2012 or within 3 years of submitting a plan for compliance with code requirements. These dates have passed and all hydraulic elevators affected have now undergone the required repairs so owners are no longer required to submit notarized statements regarding the oil usage log and testing. There are no changes to the requirements that hydraulic elevators be equipped with a safety bulkhead or equipped either rail safeties or a plunger gripper. ASME A17.1/CSA B44-2016, as well as ASME A17.1/CSA B44-2010, carry forward those requirements without change. Therefore, this subpart is no longer necessary and is being repealed.

Subpart 9. All work required for compliance with ASME A17.1/CSA B44-2010 8.6.5.8 Bulkhead Material Transfer Device. See the “GENERAL” statement at the beginning of the Rule-by-Rule Analysis section of this SONAR.

Subpart 10. All work required for compliance with ASME A17.3-2011 2.7.5 Restricted Opening of Hoistway Doors and Car Doors on Passenger Elevators [REPEAL]. This subpart is being repealed because the date set as a deadline for compliance with ASME A17.3-2011, section 2.7.5, has passed. During the 2006 update of Chapter 1307, the 2002 ASME A17.3-2002 was incorporated by reference. ASME A17.3-2002, section 2.7.5, required existing passenger elevators without door restrictors to be equipped with door restrictors. Door restrictors prevent those inside the elevator from opening the car doors more than four inches when the elevator is not eighteen inches below or above the landing floor level. This is a necessary life safety feature because passengers in elevators stalled between floors could attempt to evacuate the car by forcing the doors open, which can be especially hazardous if the elevator resumes operation with a passenger outside the car. This can result in the passenger falling backwards down the shaft through the opening under the elevator when the car is between floors. Due to the expense of adding door restrictors to an existing elevator, subpart 10 was added to permit owners of elevators five years for compliance with section 2.7.5.

The work necessary for compliance with ASME A17.3-2011, section 2.7.5, was to be completed by January 29, 2012. This was superseded by Minnesota Statutes, section 326B.188, requiring compliance with this requirement by January 29, 2012, or within 3 years of submitting a plan for compliance with code requirements. These dates have passed and all passenger elevators are equipped with door restrictors. There are no changes to the requirement that existing elevators be equipped with door restrictors. The requirement is carried forward in ASME A17.3-2015 2.7.5. Therefore, this subpart is no longer necessary and is being repealed.

Subpart 11. All work required for compliance with ASME A17.3-2011 3.11.3 Firefighter’s service [REPEAL]. This subpart is being repealed because the date set as a deadline for compliance with ASME A17.3-2011, section 3.11.3, has passed. During the 2006 update of Chapter 1307, ASME A17.3-2002 was incorporated by reference. ASME A17.3-2002, section 3.11.3, required existing elevators not equipped with firefighter’s service to be equipped with that safety feature.

Firefighter's service is a life safety feature that prevents the use of the elevator by building occupants in the event of an emergency and assists firefighters in reaching upper levels of buildings. Phase I of firefighter's service recalls all elevators to the first floor in the event of a fire, which assists in the evacuation of those in the elevators. Phase II of firefighter's service restricts the use of the elevator to emergency personnel. Because of the expense of adding firefighter's service to an existing elevator, subpart 11 was added to permit elevator owners five years for compliance with section 3.11.3. Subpart 11 also includes an exception from Phase II requirements for elevators that travel only 35 feet from the lobby and are already equipped with Phase I functionality. This was reasonable because Phase II is primarily used in taller buildings so emergency responders can quickly access higher levels of the building. Elevators equipped with Phase I functionality were also not required to be equipped with Phase II if the Phase I activated when smoke was detected. This means Phase I would activate before emergency personnel arrived so building occupants could not use an elevator located near a fire.

The work necessary for compliance with ASME A17.3-2011, section 3.11.3, was to be completed by January 29, 2012. This was superseded by Minnesota Statutes, section 326B.188, requiring compliance with this requirement by January 29, 2012, or within 3 years of submitting a plan for compliance with code requirements. Furthermore, that statute exempts condominiums with five or fewer floors from compliance with Phase I and Phase II requirements with the approval of a building official. Both deadlines for compliance have passed and all elevators are equipped with firefighter's service unless exempt by rule or by statute. The requirements for compliance with firefighter's service are carried forward in A17.3-2015, section 3.11.3, without change. Therefore, this subpart is no longer necessary and is being repealed.

Subpart 12. All work required for compliance with ASME A17.3-2011 4.3.3 Hydraulic elevators [REPEAL]. This subpart is being repealed because the date set as the deadline for compliance with ASME A17.3-2011, section 4.3.3, has passed. During the 2006 update of Chapter 1307, ASME A17.3-2002 was incorporated by reference. ASME A17.3-2002, section 4.3.3, requires existing hydraulic elevators that do not have a double cylinder or cylinder with a safety bulkhead to be equipped with one.

Hydraulic elevators operate by forcing pressurized oil through a valve into a steel cylinder. Safety bulkheads and double cylinders are necessary to prevent the rapid release oil if the cylinder fails. The rapid release of oil could cause the uncontrolled descent of the elevator car, posing a life safety risk to passengers; therefore, it was necessary for noncompliant cylinders to be replaced. Subpart 12 also required an annual submission of a notarized statement that the oil usage log was utilized and the elevator had successfully passed the annual tests required by ASME A17.3-2002. Oil usage can indicate problems with the cylinder, so it was necessary to monitor oil usage and perform annual tests to verify the cylinder continued to function correctly and did not pose an immediate life safety risk.

The work necessary for compliance with ASME A17.3-2010, section 4.3.3, was to be completed by January 29, 2012. This was superseded by Minnesota Statutes, section 326B.188, requiring compliance with this requirement by January 29, 2012, or within 3 years of submitting a plan for compliance with code requirements. These dates have passed and all hydraulic elevators affected have undergone the required repairs so owners are no longer required to

submit notarized statements regarding the oil usage log and testing. There are no changes to the requirement that hydraulic elevators be equipped with safety bulkheads or double cylinders because ASME A17.3-2015 carries forward that requirement with no change. Therefore, this subpart is no longer necessary and is being repealed.

Subpart 13. ASME A17.1/CSA B44-2010 8.10.4.1.1(p)(5) Clearance between step and skirt (load gap) and ASME A17.1/CSA B44-2010 8.10.4.1.1(t) step/skirt index [REPEAL]. This subpart is being repealed because the deadline for compliance with ASME 17.1/CSA B44-2010, sections 8.10.4.1.1(p)(5) and 8.10.4.1.1(t), have passed. Subpart 13 was added during the 2006 update of Chapter 1307 to require new escalators and moving walks, including those undergoing alteration, to be tested as required by ASME A17.1-2004 to determine the loaded gap and coefficient of friction in order to calculate the skirt/step performance index. This test shows the likelihood of a passenger's foot being trapped between the escalator step and the skirt. An escalator or moving walk that shows significant risk of injuring a passenger's foot must be equipped with a skirt brush to guide the passenger's foot away from the skirt. Because of the expense of the testing and additional expense if the tests showed the skirt must be modified, subpart 13 allowed escalator and moving walk owners three years for compliance with this requirement.

The work necessary for compliance with ASME 17.1/CSA B44-2010, sections 8.10.4.1.1(p)(5) and 8.10.4.1.1(t), was to be completed within 3 years of January 29, 2007. The escalators and moving walks affected by this subpart have been tested and modified as necessary for life safety. The requirements for these tests are carried forward in ASME A17.1/CSA B44-2016 without change. Therefore, this subpart is no longer necessary and is being repealed.

Subpart 14. ASME A17.3-2011 5.1.11 Step/skirt performance index [REPEAL]. This subpart is being repealed because the deadline for compliance with ASME 17.3-2011, section 5.1.11, has passed. Subpart 14 was added during the 2006 update of Chapter 1307 to require the step/skirt performance index be determined for existing escalators and moving walks. The step/skirt performance index shows the likelihood of a passenger's foot being trapped between the escalator step and the skirt. An escalator or moving walk that shows significant risk of injuring a passenger's foot must be equipped with a skirt brush to guide the passenger's foot away from the skirt. Because of the expense of testing and any necessary modifications to the skirt, subpart 14 allowed escalator and moving walk owners three years for compliance with this requirement.

The work necessary for compliance with ASME A17.3-2011, section 5.1.11, was to be completed within 3 years of January 29, 2007. The escalators and moving walks affected by this subpart have been tested and modified as necessary for life safety. The requirements for these tests are carried forward in ASME A17.1/CSA B44-2016 without change. Therefore, this subpart is no longer necessary and is being repealed.

Subpart 15. See the "GENERAL" statement at the beginning of the Rule-by-Rule Analysis section of this SONAR.

Subpart 16 remains unchanged.

1307.0067 AMENDMENTS TO ASME A17.1/CSA B44-2016.

Subparts 1 through 13. See the “GENERAL” statement at the beginning of the Rule-by-Rule Analysis section of this SONAR. Additionally, the section reference number contained in subpart 3 is being updated to reflect the proper section number being referenced in ASME A17.1/CSA B44-2016.

Subpart 14. See the “GENERAL” statement at the beginning of the Rule-by-Rule Analysis section of this SONAR. This subpart is also amended by deleting references to electrical licenses, specifically Class A Master and Class A Journeyworker electrical licenses, from the elevator inspector qualifications due to statutory changes that now base elevator licenses on elevator technology rather than on electrical technology.¹² The proposed amendments only allow individuals with a Master Elevator Constructor license or an Elevator Journeyworker license to qualify to become elevator inspectors. This amendment is necessary for consistency with statutory requirements for the qualifications of elevator inspectors.

Subpart 15. See the “GENERAL” statement at the beginning of the Rule-by-Rule Analysis section of this SONAR.

1307.0090 EXISTING INSTALLATIONS.

Subpart 2. Conditions for continued operation. See the “GENERAL” statement at the beginning of the Rule-by-Rule Analysis section of this SONAR.

Subparts 3 and 4 remain unchanged.

Subpart 6. Other requirements. See the “GENERAL” statement at the beginning of the Rule-by-Rule Analysis section of this SONAR.

Subpart 7. Compliance schedule. The proposed changes to subpart 7 require the authority having jurisdiction over elevators to notify owners of existing elevators of code changes when either new code requirements are adopted or upon inspection by the authority having jurisdiction. The proposed rule part is amended to require the owner to submit a compliance plan within sixty days of notice of the effective date of the new code requirements or within sixty-days after a notification following inspection. The notification of owners at the time of adoption of new code requirements will allow owners sufficient time prior to the effective date to determine if the existing elevator is compliant with new requirements and to develop a compliance schedule if the elevator does not comply. Because buildings change ownership, the authority having jurisdiction may not have updated contact information for the owner of an existing elevator. Because not all owners may be notified prior to the effective date of new code requirements for existing elevators, the proposed rule also permits notification following inspection and allows the owners of noncompliant elevators sixty days to develop and submit a compliance schedule to the authority having jurisdiction.

¹² See 2013 [Minn. Laws, Ch. 85, Art. 2, §§ 22 and 28.](#)

Due to the potential for complexity of upgrades or repairs and the associated costs generally involved in repairing or upgrading existing elevators, the proposed rule also permits an existing elevator owner up to five-years from submission of the compliance schedule to bring the elevator into compliance with the code. The current rule permitted owners of existing elevators five-years from the update of chapter 1307 in 2006 to comply with specific, new requirements for existing elevators.¹³ Similarly, the proposed amendments to subpart 7 will allow any required repairs or upgrades to existing elevators to be completed within five-years. This is further reasonable as it clarifies code requirements since existing subpart 7 allows for the submission of a compliance schedule but does not specify *when* the existing elevator must become compliant with those requirements. Allowing up to five-years for compliance with existing elevator code requirements is reasonable and needed as it will allow existing elevator owners time to effectively plan for required elevator repairs or upgrades that will necessarily result in the expenditure of costs to those owners.

Subpart 8. See the “GENERAL” statement at the beginning of the Rule-by-Rule Analysis section of this SONAR.

1307.0092 REFERENCED CODES, STANDARDS, AND SPECIFICATIONS.

This rule part is amended by deleting the existing reference to NFPA 13-2010 and replacing it with a reference to NFPA 13-2016. NFPA 13 is the standard for installation of sprinkler systems. The 2016 edition of the NFPA 13 standard is referenced in the proposed amendments to several other chapters of the Minnesota State Building Code. For purposes of uniformity between chapters and ease of use, it is necessary and reasonable to update the reference to the same edition of the NFPA 13 standard proposed to be used throughout the entire State Building Code to avoid conflicts between one chapter to another.

Additionally, the reference to “ASME A17.1a” in the subpart’s title is being deleted because that standard no longer exists independently of ASME A17.1/CSA B44-2016 and has been superseded by current applicable standards.

1307.0095 CHAPTER 30 OF THE INTERNATIONAL BUILDING CODE; ELEVATORS AND CONVEYING SYSTEMS.

This rule part is being repealed in its entirety because the proposed amendments to this chapter no longer incorporate chapter 30 of the IBC by reference (*See* part 1307.0020, subpart 1, above for a full explanation of this change and statement of reasonableness). As a result, amendments in this rule part modifying chapter 30 of the IBC are no longer applicable to this chapter. As a part of a contemporaneous rulemaking, chapter 30, and the other chapters comprising the 2018 IBC, are incorporated by reference, with amendments, in Minnesota Rules, chapter 1305. As a result, this amendment is no longer necessary and is being repealed.

¹³ See Minnesota Rules, part 1307.0047, subparts 8, 10, 11, and 12, *being proposed for repeal*, above.

1307.0110 MINNESOTA AMENDMENTS TO ASME A18.1-2017.

The title of this subpart has been amended to reflect the current edition of the ASME A18.1 standard.

Subparts 1 through 10. See the “GENERAL” statement at the beginning of the Rule-by-Rule Analysis section of this SONAR. Additionally, the section reference numbers contained in subpart 1, subitems E, F, and G are being updated to reflect the proper section number being referenced in the ASME A18.1-2017 standard.

EFFECTIVE DATE

In accordance with Minnesota Statutes, section 326B.13, subdivision 8, the Commissioner has determined that it is necessary to establish March 31, 2020, or five business days after publication of the Notice of Adoption in the *State Register*, whichever is later, as the effective date of this proposed rule chapter. The Commissioner has found and determined that it is in the public’s interest and necessary to protect public health and safety to have this proposed code chapter effective at the same time as other related proposed Minnesota State Building Code chapters, which may result in an earlier effective date than provided for in Minnesota Statutes, section 326B.13, subdivision 8.

Because other related and newly proposed Chapters of the Minnesota State Building Code are scheduled to have an effective date of March 31, 2020, it is necessary for Minnesota’s proposed elevator and related device provisions found in Chapter 1307 to become effective at the same time to alleviate any potential confusion, conflicts or misapplication of specific and interrelated code requirements by industry members, code enforcement officials, and members of the public. A common effective date for all newly adopted State Building Code chapters is essential for life and building safety because many of these chapters reference one another and are designed to work together to provide the user with a complete, current, and conflict-free reference for building specifications and requirements. Therefore, coordination of the effective dates for all newly adopted amendments to the State Building Code, including the elevator and related device provisions found in the underlying proposed rule, is necessary and reasonable.

CONCLUSION

Based on the foregoing, the proposed rules are both needed and reasonable.

[Date]

Nancy J. Leppink
Commissioner of Labor and Industry

EXHIBIT A

Construction Codes Advisory Council Members

Scott McLellan, Department of Labor and Industry Commissioner's Designee/Chair

Jim Smith, Department of Public Safety Commissioner's Designee

Scott Novotny, Board of Electricity

Patrick Higgins, Certified Building Official

Ken Hinz, Commercial Building Industry

Thomas Erdman, Commercial Building Owners/Managers

Laura McCarthy, Fire Marshal

Todd Gray, Heating and Ventilation Industry

Gerhard Guth, Licensed Architect

Thomas Downs, Licensed Professional Engineer

Mike Paradise, Licensed Residential Building Industry

Jennifer DeJournett, Local Units of Government

Mark Brunner, Manufactured Housing Industry

Dan McConnell, Minnesota Building and Construction Trades Council

EXHIBIT B

1307 Technical Advisory Group Members

Bill Reinke, TAG Lead, Senior Elevator Inspector, Department of Labor and Industry

Tim Warren, TAG Co-Lead, Construction Code Representative 2, Department of Labor and Industry

David Fisher, Association of Minnesota Building Officials

John Roche, Municipal elevator inspector, City of St. Paul

Chris Fuller, Fire Marshals Association of Minnesota

Tom Erdman, Building Owners and Managers Association

EXHIBIT D

ASME A17.3-2015, section 3.10.12

(15) **3.10.12 System to Monitor and Prevent Automatic Operation of the Elevator With Faulty Door Contact Circuits**

Means shall be provided to monitor the position of power-operated car doors that are mechanically coupled with the landing doors while the car is in the landing zone, in order

(a) to prevent automatic operation of the car if the car door is not closed [see 3.4.2(c)], regardless of whether the portion of the circuits incorporating the car door contact or the interlock contact of the landing door coupled with the car door, or both, are closed or open, except as permitted in 3.10.7

(b) to prevent the power closing of the doors during automatic operation if the car door is fully open and any of the following conditions exist:

(1) The car door contact is closed, or the portion of the circuit incorporating this contact is bypassed.

(2) The interlock contact of the landing door that is coupled to the opened car door is closed, or the portion of the circuit incorporating this contact is bypassed.

(3) The car door contact and the interlock contact of the door that is coupled to the opened car door are closed, or the portions of the circuits incorporating these contacts are bypassed.