

The Florida Senate
BILL ANALYSIS AND FISCAL IMPACT STATEMENT

(This document is based on the provisions contained in the legislation as of the latest date listed below.)

Prepared By: The Professional Staff of the Committee on Regulated Industries

BILL: CS/SB 1602

INTRODUCER: Regulated Industries Committee and Senator Galvano

SUBJECT: Elevators

DATE: January 27, 2016

REVISED: _____

	ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1.	Oxamendi	Imhof	RI	Fav/CS
2.	_____	_____	CA	_____
3.	_____	_____	FP	_____

Please see Section IX. for Additional Information:

COMMITTEE SUBSTITUTE - Substantial Changes

I. Summary:

CS/SB 1602 requires that elevators in private residences must meet minimum clearances between the inner and outer doors or gates and the landing. The bill requires that new elevators installed in a private residence must provide clearance that may not exceed four inches in the spaces between the hoistway doors, car doors, and the edge of the landing sill. The bill also requires that the car doors must be designed to withstand a force of 75 pounds using a four-inch-diameter sphere without permanent deformation, or displacing the door from its guides or track. The bill provides standards for different types of elevator car and hoistway doors, including manual and power-operated horizontal sliding doors, folding doors, and swing doors.

The bill also requires that all elevators in a residential dwelling must be equipped with a device that stops the elevator car's downward motion within two inches if the platform of the elevator is interrupted anywhere on its underside in its downward motion. The force required to operate the device must not exceed 15 pounds. The elevator could only resume its decent after the elevator has been manually reset.

The bill provides that this provision may be cited as the "Maxwell Erik 'Max' Grablin Act." Max Grablin was a 12 year old boy who was crushed to death by an elevator in his three-story home while he was in the elevator shaft searching for his pet hamster.

The effective date of the bill is July 1, 2016.

II. Present Situation:

Elevator Regulation

Chapter 399, F.S., which may be cited as the “Elevator Safety Act,”¹ establishes minimum standards for elevator safety. The Bureau of Elevator Safety (bureau) of the Division of Hotels and Restaurants (division) within the Department of Business and Professional Regulation (department) is the agency charged with enforcing the provisions of ch. 399, F.S. The department has rulemaking authority to enforce the provisions of ch. 399, F.S.² The Elevator Safety and Technical Advisory Council (advisory council) within the department provides technical assistance to the division.³ It makes recommendations regarding the rules for the operation, maintenance, servicing, construction, alteration, installation, and inspection of vertical conveyances.

The bureau has authority over all elevators, including those in private residences, however that authority does not include inspections.

The term “elevator” includes a wide variety of mechanical devices, including escalators, dumbwaiters, moving walks, inclined stairway lifts, and inclined or vertical wheelchair lifts.⁴ According to the division, there were approximately 51,070 active elevator accounts in Florida as of August 1, 2015.⁵ This number includes approximately 25,000 elevators in the five contracted jurisdictions for which it has secondary oversight responsibility.⁶

Section 399.125, F.S., requires certificate of operation holders to report any accident occurring in or upon any elevator within 5 days. It provides an administrative fine not to exceed \$1,000 for failing to timely report the accident.

Elevator Safety Code

Section 399.02(1), F.S., requires the Elevator Safety Code (code) to be the same as or similar to the American Society of Mechanical Engineers (ASME),⁷ which provides minimum model standards for the installation, operation, and maintenance of elevators. The ASME codes are meant to be adopted by the state and local agencies with jurisdiction over elevator safety.

¹ See s. 399.001, F.S.

² See s. 399.10, F.S.

³ See s. 399.1061, F.S. The Elevator Safety and Technical Advisory Council consists of eight members appointed by the secretary of the department who meet the following criteria: one representative from a major elevator manufacturing company or its authorized representative; one representative from an elevator servicing company; one representative from a building design profession; one representative of the general public; one representative of a local government in this state; one representative of a building owner or manager; one representative of labor involved in the installation, maintenance, and repair of elevators; and one representative who is a certified elevator inspector from a private inspection service.

⁴ Section 399.01(6), F.S.

⁵ *Annual Report, Fiscal Year 2014-2015*, Division of Hotels and Restaurants, Department of Business and Professional Regulation. A copy is available at: http://www.myfloridalicense.com/dbpr/hr/reports/annualreports/documents/ar2014_15.pdf (last visited January 23, 2016).

⁶ The following five local governments are under contract with the department to provide elevator inspection services: the cities of Miami and Miami Beach, Broward and Miami-Dade counties, and Reedy Creek Improvement District.

⁷ The ASME standards specified in s. 399.02(1), F.S., are ASME A17.1, A17.3, and A18.1.

Standard ASME A17 serves as the basis for the Florida Elevator Safety Act and Florida Elevator Safety Code.⁸

The code establishes minimum requirements that provide a reasonable degree of safety for the general public and the safe operation of conveyances. For example:

- ASME A17.1 (2004), provides requirements related to the installation, alteration, maintenance, repair, inspections, and testing to ensure the minimum safety requirements for new and existing elevators.
- ASME A17.2 (2004), provides a guide for the inspection of elevators, escalators, and moving walks.⁹
- ASME A17.3 (1996) is a code for existing elevators to ensure rider safety. The code provision specifically states that it is intended to guide retroactive requirements for existing elevators.

The elevator safety code requires that any alteration, relocation, or reclassification of an existing elevator must be in compliance with the edition of the Florida Building Code that is in effect at the time of receipt of the construction permit application to alter, relocate, or change classification.¹⁰ Specifically ASME A17.3, requires owners of existing elevators to retrofit elevators to comply with revisions or updates to the code.

Elevator Inspections

The owner of the elevator is responsible for the safe operation, proper maintenance, inspection, and correction of code deficiencies of the elevator.¹¹ Elevators must have a certificate of operation before they can be operated. Certificates of operation are valid for two years and expire at the end of the period unless revoked. The certificates can only be renewed for vertical conveyances that have had a current satisfactory inspection.¹²

Section 399.061, F.S., requires an annual inspection of elevators by a certified elevator inspector.¹³ The certified elevator inspector may be a private elevator inspector, a state-employed elevator inspector, or an inspector for a municipality or county under contract with the department.¹⁴ The privatization of elevator inspections has helped to increase the number of

⁸ The bureau's rules indirectly adopt the ASME standards for the maintenance and installation of elevators. Instead of specifically referencing the ASME standards, the bureau adopted ch. 30 of the 2004 Florida Building Code, including the 2006 supplements, which relates to elevators.⁸ The Florida Building Code adopts the ASME standards, including part 8 of ASME A17.1, and ASME A17.3. It also delegates the regulation and enforcement of the ASME elevator codes to the bureau. *See* Chapter 30, ss. 3001.1 and 3001.2, Florida Building Code.

⁹ ASME A17.2 (2004). The bureau has adopted and incorporated by reference in rule 61C-5.001(1)(b), F.A.C.

¹⁰ Rule 9B-3.047, F.A.C., which incorporates the Florida Building Code, including ASME A17.1 and A17.3,¹⁰ into the Elevator Safety Code, and requires that existing elevators be maintained according to the current safety standards in the Florida Building Code and the Florida Elevator Safety Code.

¹¹ Section 399.02(5)(b), F.S.

¹² Section 399.07(1), F.S.

¹³ In 2001, the Legislature amended s. 399.061, F.S., to increase the frequency of elevator inspections from once every two years to annual inspections. *See* s. 10, ch. 2001-186, L.O.F.

¹⁴ *See* s. 399.061, F.S. In 2000, the Legislature amended s. 399.061, F.S., (s. 4, ch. 2000-356, L.O.F.) to provide for the use of private elevator inspectors.

licensed inspectors and has helped the bureau increase the number of inspections conducted each year, as mandated by the annual inspection requirement.¹⁵

An elevator inspection is not required if the elevator is not an escalator or a dumbwaiter, serves only two adjacent floors, and is covered by a service maintenance contract that remains in effect.¹⁶ A statement verifying the existence and performance of each service maintenance contract must be filed at least annually with the division, and if the service maintenance contract is cancelled, the cancellation must be reported to the division.

Municipalities and counties under contract with the department may choose to require that the inspections be performed by their own inspectors or by private certified elevator inspectors. The department may inspect elevators in the municipality and county to determine whether the provisions of ch. 399, F.S., are being met. The department may cancel its contract with any municipality or county that it finds has failed to comply with the contract or ch. 399, F.S.¹⁷ Counties and municipalities may not issue or take disciplinary action against an elevator inspector's certification, but the department may initiate disciplinary action against a private inspector's certification at the request of a county or municipality.

Section 399.02(6)(b), F.S., provides that the division may enter and have reasonable access to all buildings and rooms or spaces in which an existing or newly installed conveyance and equipment are located.

Section 399.02(8), F.S., authorizes the division to grant variances for undue hardship under the variance provision in s. 120.542, F.S., and the rules adopted under that section.¹⁸ The division may not grant a variance that adversely affects public safety.

Section 399.07(6), F.S., authorizes the bureau to suspend a certificate of operation if it finds that the elevator is not in compliance with ch. 399, F.S., or the rules adopted pursuant to its authority. The suspension remains in effect until the department receives satisfactory results of an inspection performed by a certified elevator inspector indicating that the elevator has been brought into compliance.

Section 399.105(1), F.S., authorizes an administrative fine of not more than \$1,000 against any person who fails to respond to reasonable requests of the department to determine whether the provisions of a service maintenance contract and its implementation ensure safe elevator operation.

Section 399.105(3), F.S., provides that an elevator owner who continues to operate an elevator after notice to discontinue its use or after it has been sealed by the department is subject to an administrative fine not greater than \$1,000 for each day the elevator has been operated after the service of the notice or sealing by the department, in addition to any other penalty provided by law.

¹⁵ *Privatization Has Helped Improve Elevator Safety: Additional State Oversight is Needed*, Report No. 08-18, Office of Program Policy Analysis & Governmental Accountability, Florida Legislature, April 2008.

¹⁶ Section 399.061(1), F.S.

¹⁷ Section 399.13, F.S.

¹⁸ Rule 61C-5.018, F.A.C., provides the division's process for variance requests.

Section 339.105(4), F.S., requires that elevator owners must correct violations within 90 days after the issuance of an order to correct.

Section 399.11, F.S., provides second degree misdemeanors for violations of ch. 399, F.S., and rules adopted under this chapter.

Private Residences

A certificate of operation is not required for vertical conveyances, including stairway chairlifts, and inclined or vertical wheelchair lifts located in private residences.¹⁹

Elevators in private residences are not required to have a pre-use inspection by a certified elevator inspector not employed, associated, or having a conflict of interest with the elevator construction permit holder or elevator owner and certified as meeting the safety provisions of the Florida Building Code, including the performance of all required safety tests.²⁰

Section 399.01(9), F.S., defines the term “private residence” to mean a separate dwelling or a separate apartment in a multiple dwelling which is occupied by members of a single-family unit.

Safety Concerns with Private Elevators

There are multiple reports of injuries or fatalities involving children and elevators in private residences.²¹

Safety advocates filed a petition with the Consumer Product Safety Commission (commission) requesting mandatory safety standards for the design and installation of residential elevators to reduce the space between the interior elevator doors (elevator car/gate) and the exterior doors (hoistway or swing doors).²² The petition is based on concerns related to injuries and fatalities to children caused when children gain access to the space between the interior and exterior door. Injuries occur when a child is trapped between the doors or between a door and the landing and the elevator is called and the child is carried along and crushed when the child’s body meets the sill.

The ASME standard for residential elevators requires a five inch clearance between interior and exterior doors. ASME A17.1, sec. 5.3.1.7.2, provides:

¹⁹ Section 399.03(5), F.S.

²⁰ *Id.*

²¹ See The Safety Institute, *Safety Advocates Petition CPSC for Mandatory Residential Elevator Standard Citing Numerous at Deaths* <http://www.thesafetyinstitute.org/safety-advocates-petition-cpsc-for-mandatory-residential-elevator-standard-citing-numerous-deaths/> (last visited January 22, 2016), and CBS News, *In-home elevator accidents causing catastrophic harm to kids* at <http://www.cbsnews.com/news/in-home-elevator-accidents-causing-catastrophic-harm-to-kids/> (last visited January 22, 2016).

²² Petition for Recall to Repair/Retrofit and Rulemaking by petitioners The Safety Institute, Carol Pollack-Nelson, Ph.D., and Cash, Krugler and Fredricks, L.L.C., filed with the United States Consumer Products Safety Commission on November 13, 2014. A copy of the petition is available at: <http://www.regulations.gov/#!documentDetail;D=CPSC-2015-0001-0002> (last visited January 21, 2016).

Clearance Between Hoistway Doors or Gates and Landing Sills and Car Doors or Gates. The clearance between the hoistway doors or gates and the hoistway edge of the landing sill shall not exceed 75 mm (3 in). The distance between the hoistway face of the landing door or gate and the car door or gate shall not exceed 125mm (5 in.).

The petition noted that some states have enacted standards that are more stringent than required by ASME. The petition also noted that the Massachusetts elevator code restricts any gaps between the hoistway doors and the car doors or gates to three inches.²³

The commission invited written comments concerning the petition but has not taken further action.²⁴

Maxwell Erik Grablin, of Bradenton, Florida, was crushed by an elevator in his three-story home searching for his pet hamster while in the elevator shaft. Reports indicate that the elevator did not have a sensor. A sensor would have stopped the elevator when it detected his presence, e.g., a sensor similar in function to the sensor on garage doors that stops and reverses the descent of the door when faced with an obstruction.²⁵

III. Effect of Proposed Changes:

The bill creates s. 399.031, F.S., to provide clearance and safety device requirements for elevators in private residences.

The bill requires that elevators installed in a private residence must provide clearance may not exceed 4 inches in the spaces between the edge of the landing sill, the hoistway doors, and the car doors.

The bill also requires that horizontal sliding car doors and folding car doors must be designed to withstand a force of 75 pounds using a 4-inch-diameter sphere without permanent deformation, or displacing the door from its guides or track. According to an elevator inspector, this provision relates to the rigidity of the elevator doors. Rigidity standards may prevent a child from warping the door in order to fit in the space provided.

The bill provides these standards for different types of elevator car and hoistway doors, including manual and power-operated horizontal sliding doors, folding doors, and swinging doors.

The bill also requires that all elevators in a residential dwelling must be equipped with a device that stops the elevator car's downward motion within two inches if the platform of the elevator is interrupted anywhere on its underside in its downward motion.²⁶ The force required to operate

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²⁴ See <https://www.federalregister.gov/articles/2015/01/22/2015-00907/petition-requesting-rulemaking-on-residential-elevators> (last visited January 22, 2016).

²⁵ See Irby, Kate, *After Florida boy suffocates in elevator shaft chasing pet hamster, his parents on safety mission*, The Miami Herald, January 18, 2016 at <http://www.miamiherald.com/news/state/florida/article55252190.html> (last visited January 23, 2016).

²⁶ ASME 5.3.1.1.1 requires a stopping distance of 75 mm (three inches) in private residence elevators.

the device must not exceed 15 pounds. The elevator could only resume its decent after the elevator has been manually reset.

The bill applies to all new elevators installed in a private residence.

The bill provides that s. 399.031, F.S., may be cited as the “Maxwell Erik ‘Max’ Grablin Act.”

The effective date of the bill is July 1, 2016.

IV. Constitutional Issues:

A. Municipality/County Mandates Restrictions:

None.

B. Public Records/Open Meetings Issues:

None.

C. Trust Funds Restrictions:

None.

V. Fiscal Impact Statement:

A. Tax/Fee Issues:

None.

B. Private Sector Impact:

None.

C. Government Sector Impact:

The department did not submit a fiscal analysis for the impact on the agency.

VI. Technical Deficiencies:

None.

VII. Related Issues:

None.

VIII. Statutes Affected:

This bill creates section 399.031 of the Florida Statutes.

IX. Additional Information:

- A. **Committee Substitute – Statement of Substantial Changes:**
(Summarizing differences between the Committee Substitute and the prior version of the bill.)

CS by Regulated Industries on January 27, 2016:

The committee substitute does not provide that the elevators installed in a residential dwelling must provide clearances that may not exceed three inches between the doors or gates and the hoistway land sill of the elevator.

The CS also does not require that elevators must be equipped with a sensor device that prevents the elevator from operating if an object or any part of a person is located between the hoistway face of the landing door or gate and the car door or gate.

The CS increase to four inches the maximum permissible distance for the spaces between the edge of the landing sill, the hoistway doors, and the car doors. The CS also requires that horizontal sliding car doors and folding car doors must be designed to withstand a force of 75 pounds under specified conditions. The CS provides these standards for different types of elevator car and hoistway doors.

The CS bill also requires that all elevators in a residential dwelling must be equipped with a device that stops the elevator car's downward motion within two inches if the platform of the elevator is interrupted anywhere on its underside in its downward motion, and provides additional requirements for operation of the device.

The CS does not use or define the term "residential dwelling."

The CS limits the application of the bill to all new elevators in a private residence, and does not apply to existing elevators.

- B. **Amendments:**

None.