

# UNDERSTANDING ELEVATOR EMERGENCY COMMUNICATION CODE COMPLIANCE



  
**KINGS III**  
EMERGENCY COMMUNICATIONS

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# INTRODUCTION

Few people think of elevator phones as part of a critical communication system and, as a consequence, these phones are sometimes viewed as a nuisance by those that are responsible for providing them. Because telecommunications is not a traditional area of expertise for elevator mechanics, phone issues can sometimes be misdiagnosed. A common remedy for phone trouble is to immediately replace the phone, which can be rather costly. In other cases, the phone lines are considered the issue. This may not always be the case.

Elevator mechanics are not trained in telecommunications and frequently suggest just replacing the "part" (the phone) to remedy issues. Other times the issue is identified as the phone line and completely separate from the elevator itself leading to multiple parties needing to be involved in the fix. In many cases, replacing the phone and/or troubleshooting the line is not right solution for today's modern buildings. This simply does not work to meet the security needs of government buildings.

## THE BAD NEWS:

As much as you kick, scream and fight, you are required by law to provide emergency phones in your elevators and with that comes a set of many codes that you must comply with and are liable for.

## THE GOOD NEWS:

It doesn't have to be that hard! We'll walk you through the codes you should be adhering to, phone line suggestions that comply and still save money and a quick and easy checklist to test your emergency phones to ensure that they're working properly.

**Note:** Elevator emergency communication code is addressed at a high level within [IBC](#) and [ADA](#) but is expanded upon at a more granular level within The American Society of Mechanical Engineers (ASME) code. This is where we will focus within this guide.

# ASME CODES YOU SHOULD KNOW

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**We will start with the most basic - the emergency communication code required of private residential elevators:**

## **American Society of Mechanical Engineers (ASME) A17.1-2022 Section 5.3.1.20 Emergency Signaling Devices**

### **5.3.1.20.1 Two-Way Communication Means**

A two-way communication means permanently installed in the car shall be provided to summon personnel who can take the appropriate action 24 h each day. The two-way communications means shall not be transmitted to an automated answering device.

If the normal power source for the communications means fails, the communications means shall automatically transfer to a source of standby or emergency power capable of providing service for at least 4 h.

The purpose of this requirement is not so that passengers can necessarily make phone calls while they ride, but rather for the sole purpose of summoning help in the event of entrapment. Often, cell phones do not have service in elevators, so this is of utmost importance.

### **5.3.1.20.2 Emergency Signaling Device**

An emergency signaling device operable from inside the car and audible outside the hoistway shall be provided. The operating means shall be labeled "ALARM" or with the appropriate symbol as defined in Table 2.26.12.1.

If the normal power source for the emergency signaling device fails, the emergency signaling device shall automatically transfer to a source of standby or emergency power capable of providing service for at least 1hr.



# ASME CODES YOU SHOULD KNOW

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When it comes to commercial and other publicly accessible facilities (including multifamily properties), codes become more specific, and, consequently, can seem more complex. Here are the ones you need to know:

## American Society of Mechanical Engineers (ASME) A17.1-2022 Section 2.27 Emergency Operation and Signaling Devices

### 2.27.1.1.1

A communications means between the car and a location staffed by authorized personnel who can take appropriate action shall be provided.

Who is someone who can take **"appropriate action"**? To fulfill this law, whoever is staffed must be able to summon help to elevator, but when you're thinking life safety, is this enough? Some additional items to consider: Can your operators **provide medical instructions**? Do they let you know when an issue arises? Do they **keep recordings of calls placed**?

### 2.27.1.1.2

If the call is not acknowledged [2.27.1.1.3(c)] within 45 s, the call shall be automatically directed to an alternate on- or off-site location.

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## 2.27.1.1.3

The communication means within the car shall comply with the following requirements:

- (a)** In jurisdictions enforcing the NBCC, Nonmandatory Appendix E; in jurisdictions not enforcing the NBCC, ANSI/ICC A17.1, ADAAG, or ADA/ABAAG.
- (b)** A push button to actuate the communications means shall be provided in or adjacent to a car operating panel. The push button shall be visible and permanently identified with the phone symbol (see 2.26.12.1). The identification shall be on or adjacent to the phone push button. The communications means shall be initiated when the push button is actuated.



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## 2.27.1.1.3 (cont.)

The communication means within the car shall comply with the following requirements:

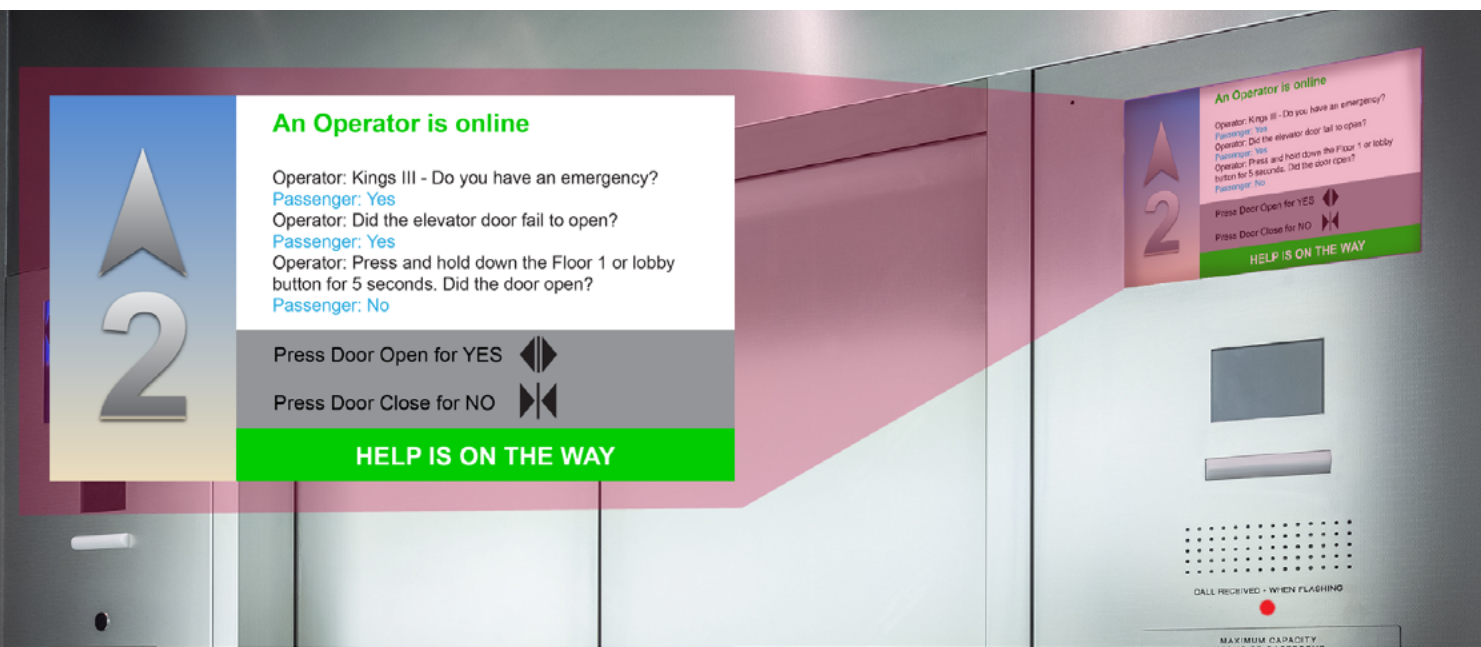
**(c) \*Added in 2019:** On the same panel as the phone push button, a message shall be displayed that is activated by authorized personnel to acknowledge that communications are established. The message shall be permitted to be extinguished where necessary to display a new message [see (d) and (e)] or when the communications are terminated.

**(d) \*Added in 2019:** On the same panel as the phone push button, messages shall be displayed that permit authorized personnel to communicate with and obtain responses from a trapped passenger(s), including a passenger(s) who cannot verbally communicate or hear.

**(e) \*Added in 2019:** On the same panel as the phone push button, a message shall be displayed that is activated by the authorized personnel to indicate when help is on the way. The message shall continue to be displayed until a new message is displayed [see 2.27.1.4(c)] or the communications are terminated.

### What does this mean?

The elevator must have the ability for authorized personnel to send messages to as well as receive responses from trapped passengers. This includes passengers that cannot speak or hear.



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## 2.27.1.1.3 (cont.)

The communication means within the car shall comply with the following requirements:

**(f)** The communication means shall provide on demand to authorized personnel information that identifies the building location and elevator number.

**(g)** The communications, once established, shall be disconnected only when authorized personnel outside the car terminate the call or a timed termination occurs. A timed termination by the communications means in the elevator, with the ability to extend the call authorized personnel, is permitted if voice notification is sent by the communications means a minimum of 3 minutes after communication has been established. Upon notification, authorized personnel shall have the ability to extend the call; automatic disconnection shall be permitted if the means to extend are not enacted within 20 seconds of the voice notification.

**(h)** The communications means shall not use a handset in the car.

**(i)** The communications shall not be transmitted to an automated answering system. The call for help shall be answered by authorized personnel.

**(j)** Operating instructions shall be incorporated with or adjacent to the phone push button.

**(k)** **Added in 2019:** A means to display video to observe passengers at any location on the car floor, to authorized personnel for entrapment assessment, shall be provided.

This is largely overlooked: Many answering services are automated to have the system answer, press 1 for this, 2 for that, etc. or put callers in a queue waiting for the next available operator. **Code states this is not acceptable.**

### What does this mean?

The elevator must have video capabilities for the authorized personnel to view the entire floor of the elevator cab for in the event that they cannot hear a passenger or if the passenger is unable to speak.



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## 2.27.1.1.4

Where the elevator rise is 18 m (60 ft) or more, a communications means within the building accessible to emergency personnel shall be provided and shall comply with the following requirements:

- (a)** The means shall enable emergency personnel within the building to establish communications to each car individually. The communications shall be established without any intentional delay and shall not require intervention by a person within the car. The means shall override voice communications to outside of the building.
- (b)** The communications, once established, shall be disconnected only when emergency personnel terminates the call or a timed termination occurs. A timed termination by the communications means in the elevator, with the ability to extend the call by authorized personnel, is permitted if voice notification is sent by the communications means a minimum of 3 minutes after communication has been established. Upon notification, emergency personnel shall have the ability to extend the call; automatic disconnection shall be permitted if the means to extend are not enacted within 20 seconds of the voice notification.

### IN ENGLISH, PLEASE?

- Calls must be answered by live personnel.
- If travel exceeds 60 ft., an accessible phone onsite must be available for emergency personnel to speak with the elevator passengers.
- Phone must be able to break into existing elevator phone calls. If a call is connected to an offsite answering facility the lobby phone must be able to join in the conversation.
- Phone must be able to select which elevator(s) to connect to.
- The elevator phone must automatically answer inbound calls. You must be able to call back in to the elevator and the phone must automatically answer.

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## 2.27.1.1.4 (cont)

Where the elevator rise is 18 m (60 ft) or more, a communications means within the building accessible to emergency personnel shall be provided and shall comply with the following requirements:

**(c) \*Added in 2019:** Once the communications have been established, a message shall be displayed on the same panel as the phone pushbutton, that is activated by the emergency personnel to indicate that help is on-site. The message shall be permitted to be extinguished where necessary to display a new message [see (e)] or when the communications are terminated.

**(d)** Operating instructions shall be incorporated with or adjacent to the communications means outside the car. Instructions shall conform to 2.27.3.

### Why is this important?

Currently, many elevators only have a light to indicate that help is on the way. The new indicator will provide clarity and additional reassurance to the entrapped passenger.



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## 2.27.1.1.4 (cont)

Where the elevator rise is 18 m (60 ft) or more, a communications means within the building accessible to emergency personnel shall be provided and shall comply with the following requirements:

(e) **\*Added in 2019:** On the same panel as the phone push button, messages shall be displayed that permit emergency personnel to communicate with and obtain responses from a trapped passenger, including a passenger who cannot verbally communicate or hear.

### Why is this important?

This provides additional support to those passengers who are speech or hearing impaired.

(f) **\*Added in 2019:** A means to display video to observe passengers at any location on the car floor, to emergency personnel for entrapment assessment, shall be provided.

### Why is this important?

A video feed into the cab provides emergency personnel with additional information to better assess the situation. This includes verifying whether a passenger is unconscious, simply nonverbal or perhaps the call is a false alarm, and there is no one in the elevator.

# ASME CODES YOU SHOULD KNOW

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The previous section displayed all line items of the most current version of ASME Elevator Code. This code is typically adopted at the state level, so depending on what year the state has adopted, a building may be responsible for different line items of the code. Here's a table that breaks down the requirements of ASME A17.1/CSA B-44 showing all versions dating back to 2000. Refer to the year your state follows to determine what you must do to be code compliant. Not sure which year your state requires? [LEARN HERE.](#)

Kings III Equipment is designed to be **ADA** and **IBC** compliant.

	2000	2004/ 2007	2010/ 2013/ 2016	2019 & MOVING FORWARD
Two-way communication between elevator & authorized personnel	✓	✓	✓	✓
Machine room communications if over 60ft of travel	●	●	●	●
Answered by a live authorized personnel - no automated answering	✓	✓	✓	✓
Communication capability for on-site authorized/emergency personnel	✓	✓	✓	✓
On-site monitoring if staffed 24/7 by authorized personnel	✓	✓	✓	✓
Location identification on demand to authorized personnel	✓	✓	✓	✓
Location identification without voice communication <i>(ADA compliance date 1994)</i>	A	✓	✓	✓
Hands-free devices only (handsets not approved)		✓	✓	✓
Automatic answering when calling into the elevator		✓	✓	✓
Automatic redirect if no answer on-site		✓	✓	✓
Off-site communications shall not interfere with on-site communications		✓	✓	✓
Local telephone line status monitoring and local alert			✓	✓
Two-way message display in the cab for hearing/speech impaired *				✓
Means for authorized personnel to view video of passengers anywhere in the cab *				✓
Means activated by emergency personnel to change the cab message to indicate help is on-site if over 60ft of travel *				✓

✓ Required by ASME A17.1/CSA B-44

A Required by the ADA

● Only if remote machine room (2.7.8.4)

\* Part of on-site communication requirements if over 60ft of travel

# TESTING YOUR ELEVATOR PHONE

Your state enforces ASME A17.1 for elevator emergency communications. A working emergency telephone or intercom is required by this code.

Even if phone lines are code-compliant, there is always the possibility of a malfunction, so testing them routinely is essential. While this can seem tedious, it doesn't have to be time consuming. The easiest way to test your elevator involves two testers. If only using one tester, be sure to lock out one elevator. Follow this quick and easy checklist to ensure elevators are Americans with Disabilities Act (ADA), ASME, and International Building Code (IBC) compliant:

Activate at least two elevator phones at approximately the same time to test that each phone in use at the same time is able to carry on a two-way conversation with emergency operator(s).

**This part of the test failed if:**

- Only one or none of the calls go through
- One call connects but disconnects once 2nd phone is activated
- The phones will not dial out
- The calls can be completed but the parties cannot hear each other

From each elevator, ask the operator to identify your location and cab number, as required by ASME.

**This part of the test failed if:**

- The operator cannot ID the elevator without aid from the caller.

Call from the emergency responder phone (*generally located at a guard station on the main egress level or in the fire control room*) to test the on-site emergency responder's ability to call directly back to the elevators without intentional delay.

**This part of the test failed if:**

- The elevator phones cannot be called back directly.

Once all aspects of this simple test are passed, you can be assured your elevator emergency communications system is both working properly and is code-compliant.

**NOTE: If your state follows ASME A17.1-2019:**



# MAKE SURE YOUR LANDLINE REPLACEMENT STRATEGY IS CODE-COMPLIANT

A timely consideration: due to Order 10-72a1 issued by the FCC in August of 2019 announcing the decommissioning of landlines, those still utilizing POTS (Plan Old Telephone Service) lines are experiencing skyrocketing costs and a decrease in service reliability. As POTS replacement increases, there's been a lack of regulation regarding communicators that has led to non-code compliant devices being sold for use in elevators. If you are currently seeking out a landline replacement for your elevator phones, it's important you choose a solution that will meet code.

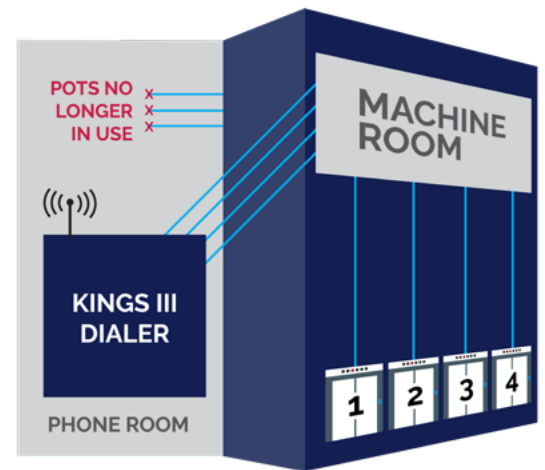
## SPECIFIC REQUIREMENTS TO CONSIDER TO MEET ELEVATOR CODE

### DEVICES MUST:

- Have at least 4-hour battery backup of continuous talk time.
- Trigger phone line verification via an alarm system.
- Have the ability for operators to identify caller location, including address and specific elevator cab number, without caller assistance.

### THE SOLUTION: KINGS III CELLULAR

While other devices on the market often fall short of these ASME code standards, Kings III's cellular solution exceeds elevator code requirements. It completely **eliminates dependency on POTS lines by leveraging the LTE mobile network**. For elevators, our solution uses a traditional ADA-compliant hands-free phone in each elevator cab. The cellular transceiver is located outside of the concrete & steel-lined shaft.



While utilizing VoIP networks can be ideal for general communication, it typically is not a code compliant solution for emergency communications.

## CHECK OUT THIS CUSTOMER'S STORY

Extra Space Storage Future Proofs Emergency Phone

# ABOUT KINGS III EMERGENCY COMMUNICATIONS

Kings III Emergency Communications has been providing complete, compliant, and affordable emergency phone solutions for elevators, poolside, stairwells, parking areas, and more for over 30 years. As leaders in elevator code compliance and on-site life safety, our customers and partners confidently lean on us for our emergency communications expertise.

We help replace costly and poorly serviced landlines with our cellular technology, providing cost savings all while helping customers mitigate risk and liability via enhanced operator training and digital recording and storing of all calls.

Our all-inclusive solution includes equipment, installation, maintenance, and 24/7 monitoring at our very own Emergency Dispatch Center for one low price. We are designed, assembled and supported in the USA.

## OUR SOLUTIONS

- Meet accessibility mandates
- Support active shooter/breach preparedness
- Conform with sustainable building practices
- Integrate into smart building designs

# 98%

## CUSTOMER RETENTION

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