

ERCES COMPLIANCE GUIDE

Florida Emergency Responder Communication Enhancement Systems

For general contractors, developers and building owners.
Current to the 8th Edition Florida Fire Prevention Code.

What the Florida statute and the Florida Fire Prevention Code actually require, which buildings are exempt, and how to keep the scope off the critical path.

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Which Rules Actually Apply In Florida?

Most published material on emergency responder radio coverage describes the International Fire Code. Florida does not use the IFC. The requirement here runs through two documents that vary from the national articles.

Florida Statute 633.202(18)	Sets the framework. The authority having jurisdiction determines minimum radio signal strength in all new and existing buildings. The statute also lists the exemptions and limits what a local AHJ can require.
Florida Fire Prevention Code, 8th Edition (2023)	Adopted statewide effective December 31, 2023. Based on NFPA 1 (2021). Section 11.10 covers two-way radio communication enhancement systems, with Florida-specific amendments at 11.10.2 and 11.10.2.1.
NFPA 1221 (2019)	The technical standard the FFPC incorporates by reference. This is what your system is designed and tested against in Florida today.
NFPA 1225 (2022)	The successor standard that consolidated NFPA 1221 and 1061. It is not what the Florida code points to, though AHJs are reported to accept it on request. Requirements are substantially similar. Ask rather than assume.

> Confirm the standard before you design. A system engineered to NFPA 1225 will generally satisfy an NFPA 1221 review, but your submittal and test documentation need to reference whichever one your AHJ is enforcing. Ask at the start, not at acceptance.

THE TERMINOLOGY

Four terms describe the same scope, which causes confusion on submittals and in bid documents.

ERCES	Emergency Responder Communication Enhancement System. NFPA's term.
ERRCS	Emergency Responder Radio Coverage System. The IFC term, common in specs and certifications.
Two-way radio communication enhancement system	The phrase used in the Florida statute and the FFPC. Legally, this is the term that governs here.
BDA / public safety DAS	The bi-directional amplifier and the antenna network it feeds. Components, not the system.

Which Buildings Are Exempt?

Florida exempts more buildings than most people expect. If your project is on this list, the conversation is over before it starts.

- Buildings under 12,000 total gross square feet with no underground areas
- One- and two-family dwellings and townhouses
- Apartments and transient public lodging under three stories where units have direct access to an exterior means of egress
- Wood-framed apartment buildings 75 feet or less in height, with fewer than 150 dwelling units, where all units discharge to the exterior or to a corridor leading directly to an exit. The owner has to evidence wood-frame construction with building permit documentation identifying the construction type.

THE EXTERIOR SIGNAL TEST

There is a gate here that is routinely missed. Under s. 633.202(18)(e), where the AHJ determines that public safety signal strength or delivered audio quality is inadequate at the exterior of the building, neither a system nor even a radio strength assessment is required.

The Florida amendment at FFPC 11.10.2.1 sets the benchmark: where existing coverage at the exterior does not meet or exceed delivered audio quality of 3.4 or greater, for analog or digital systems, a two-way radio communication enhancement system is not required.

The logic is that a building cannot be asked to amplify a signal the jurisdiction is not delivering to the site. It is the fastest way to find out that your project has no obligation, and the determination rests with the AHJ.

EXISTING BUILDINGS

Existing high-rise buildings had an extension. That window has closed.

January 1, 2024	Deadline for a non-compliant existing high-rise to have applied for the installation permit.
January 1, 2025	Deadline for existing high-rise buildings to be compliant. This date has passed.

> **If you own or manage an existing Florida high-rise that has not addressed this, you are past the statutory deadline.** The first step is an assessment, which may find that no system is required.

What Does The System Need To Achieve?

Where a system is required, the building is tested on a grid and evaluated area by area. The AHJ sets the specific levels, based on the coverage its own radio system delivers. The figures below come from the referenced NFPA standards rather than the Florida statute, so confirm them against the edition your AHJ enforces.

REQUIREMENT	TYPICAL THRESHOLD
General Building Areas	95% of the grid must pass
Critical Areas	99% of the grid must pass
Critical Areas	Designated by the fire official. Commonly fire command centers, exit stairs and exit passageways, elevator lobbies, areas of refuge, fire pump rooms and standpipe or sprinkler valve locations. Get the list in writing
Signal Strength	Generally a minimum received signal of -95 dBm, inbound and outbound
Audio Quality	Delivered audio quality of 3.0 minimum. NFPA recommends designing to 3.4 for margin
Secondary Power	12 hours minimum standby at full system load under the NFPA standards. A 2-hour battery is acceptable where a generator sustains 12 hours of full operation. Some AHJs enforce 24 hours; confirm locally
Enclosures	NEMA 4 or 4X for equipment, NEMA 3R for batteries
Equipment Listing	Amplifier equipment certified to UL 2524
Supervision	Trouble conditions reported to the fire alarm system, including donor antenna malfunction and low battery
Pathway	Two-hour rated cable or equivalently protected pathway where required

> Note the two different DAQ figures. The 3.4 threshold in FFPC 11.10.2.1 is the exterior test that determines whether a system is required at all. The 3.0 minimum is the interior performance the installed system has to deliver.

6 Reasons Systems Fail Acceptance

Five of the six are decided long before anyone energizes the amplifier.

1. COVERAGE GAPS IN STAIRS OR BELOW GRADE

Antennas were laid out from a floor plan rather than a survey. Stairwells, exit passageways and parking levels are the usual misses, and they are the areas held to 99% rather than 95%.

2. DONOR ANTENNA PATH OR ISOLATION

The roof location was picked after the roof was finished, or the donor does not have adequate isolation from the interior antennas. Either produces oscillation or too little signal into the amplifier.

3. NO PATHWAY RESERVED

Coax has nowhere to run because the design allocated no sleeves or conduit during rough-in. Correcting it means opening finished ceilings.

4. MISSING FIRE ALARM SUPERVISION

The panel was never programmed for the trouble and low-battery points, and the fire alarm contractor has demobilized. A system can meet every coverage number and still fail here.

5. NON-COMPLIANT ENCLOSURE, BATTERY OR LISTING

Wrong NEMA rating, standby capacity short of 12 hours at full load, or equipment not listed to UL 2524. All three are catalog decisions made at bid time.

6. INCOMPLETE DOCUMENTATION

Coverage passes and the inspection still fails because the approved drawings, grid test records and acceptance forms are not assembled the way the AHJ wants them.

What Does Florida Law Protect You From?

Several provisions work in the owner's and the contractor's favor. They are worth knowing before a plan reviewer tells you otherwise.

A TCO cannot be withheld for this alone	Under Florida Statute 553.79, a local jurisdiction may not withhold a temporary certificate of occupancy for a new building based solely on the need for a two-way radio communication enhancement system. An extension of a TCO may not be unnecessarily withheld.
You get 12 months after TCO	Once the AHJ approves the design, the jurisdiction must require installation within 12 months after the TCO is issued. The system does not have to be operational to open the building.
Local AHJs cannot be more stringent	A local authority may not enforce requirements more stringent than the FFPC with respect to whether a system is required, how it is designed, or how it is installed.
180 days' notice on system changes	If a jurisdiction modifies its own radio system such that existing installations need changes, owners get at least 180 days' notice, and one year from a notice of violation to complete the retrofit.
Licensed contractor submits the design	Where an assessment finds a system is required, a contractor holding the appropriate Florida license must submit the design to the AHJ.
Reassessment is capped	A jurisdiction may require a coverage assessment no more than once every 3 years for existing high-rises and existing buildings over 12,000 gross square feet, and once every 5 years for all other existing buildings. That cap lifts for a Level III alteration or rehabilitation, reconstruction as determined by the FFPC, a public safety agency reporting that its radios failed inside the building, or a finding that the building is an imminent life safety threat to first responders.

> **This changes the sequencing conversation.** The radio system is not what holds your certificate of occupancy in Florida. What it does create is a 12-month clock that starts at TCO, and a remediation cost that rises sharply once ceilings close. The reason to handle it early is cost and schedule, not occupancy.

FCC COORDINATION

Consent of the FCC license holder, meaning the jurisdiction's radio system operator, is required before any system is installed or modified. Build that approval into the schedule rather than discovering it at commissioning.

Sequencing

PROJECT PHASE	WHAT SHOULD HAPPEN
Design development	Exterior signal test and benchmark survey. Establishes whether the exemption or the DAQ 3.4 gate applies, and whether a system is required at all. Head-end room, riser and roof access reserved in the drawings.
Construction documents	System design produced by a Florida-licensed contractor and submitted to the AHJ. FCC license holder consent initiated. Pathway, power and fire alarm interfaces coordinated with Divisions 26 and 28.
Rough-in	Sleeves, conduit and cable installed with the rest of the building. The cheapest point in the project to place any of it.
Trim and finish	Antennas, amplifier and batteries installed. Fire alarm panel programmed for the supervisory points.
Pretest	Contractor runs the full grid test and corrects any shortfall before requesting inspection.
Acceptance	Test witnessed by the fire official. Documentation package submitted.
After occupancy	Annual inspection and testing, with records retained. Reassessment no more often than the statute allows.

WHO SHOULD HOLD THE SCOPE?

The system depends on three things: power, pathway, and the fire alarm panel. When one contractor holds all of them, the coordination happens internally and before installation.

If the scope is bid separately, make sure the documents assign responsibility for the dedicated circuit, the pathway, the roof penetration, and the fire alarm programming. Those four items generate most of the change orders on this scope.

Preconstruction Checklist

Work through this before construction documents are issued.

- [ ] Does the building fall under one of the statutory exemptions?
- [ ] Has the exterior signal been measured against the DAQ 3.4 threshold?
- [ ] Has the AHJ confirmed which standard it enforces, NFPA 1221 or NFPA 1225?
- [ ] Has the AHJ stated its coverage thresholds and which areas it considers critical?
- [ ] Are the jurisdiction's frequency bands and system type documented?
- [ ] Has FCC license holder consent been initiated?
- [ ] Is a head-end location identified with adequate space, dedicated circuit and cooling?
- [ ] Is a donor antenna location identified and coordinated with the roofing scope?
- [ ] Is riser pathway allocated in the drawings, with sleeves shown?
- [ ] Does the fire alarm scope include the supervisory and low-battery points?
- [ ] Is survivable pathway or two-hour rated cable specified where required?
- [ ] Is standby capacity specified at 12 hours full load, or 2 hours plus generator?
- [ ] Are enclosures specified NEMA 4 or 4X, with NEMA 3R for batteries?
- [ ] Is the amplifier equipment listed to UL 2524?
- [ ] Is a pretest scheduled before the AHJ inspection is requested?
- [ ] Is one party responsible for assembling the documentation package?
- [ ] Is the 12-month post-TCO installation window reflected in the schedule?
- [ ] Is annual testing budgeted in the building's operating plan?

About Suncoast Power

Suncoast Power is a woman-owned commercial electrical contractor based in Tampa, FL. We self-perform electrical, low voltage, and fire alarm & emergency responder radio coverage.

Our leadership spent two decades in wireless and public-safety infrastructure before the company was acquired, in senior roles at Sprint/Nextel, Corning MobileAccess, JMA Wireless and Strategic Venue Partners, covering systems across more than 100 million square feet of commercial property.

WHAT WE CAN DO FOR YOUR PROJECT

Coverage Survey During Design

While the drawings can still absorb the pathway and head-end space, we survey the site and determine whether a system is required, what it will take, and provide a cost estimate.

Remediation of a failed system

If a system installed by others did not pass, send us the failure report. We will survey, to determine what failed, and provide a written scope and estimate.

Request A Coverage Survey

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For more information, visit suncoastpower.com/erces

Scope and Sources: Statutory content is drawn from Florida Statutes s. 633.202(18) and s. 553.79 as published by the Florida Legislature. Code text at FFPC 11.10.2 and 11.10.2.1 is drawn from the State Fire Marshal's published Florida amendments to NFPA 1 (2021). Both statute sections have been amended repeatedly, most recently in 2026, and subsection numbering has shifted, so cite the section rather than a subsection. The coverage, signal, power, enclosure and listing figures come from the NFPA standards referenced by the code, not from Florida law, and the AHJ sets the levels for your project. This document is a summary meant to serve as a guide, not a code document, and does not substitute for the code text or the direction of your authority having jurisdiction.

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