

Lucas Countywide Communications System (CCS) Bi-Directional Amplifier (BDA/Signal Booster) Policy

This policy outlines requirements and procedures for building operators and vendors to install and use a BDA to amplify frequencies used on the Countywide Communications System. It refers to FCC rules and the Ohio Fire Code. Any customer or vendor installing a BDA on the Countywide Communications System should also refer to the FCC rules, Fire Codes, and local building codes to ensure compliance.

Requires Licensee Consent – Rule 90.219

- The FCC requires that non-licensees who seek to operate signal boosters must obtain the consent of the licensee (Countywide Communications System), whose signals they intend to amplify. Consent will be provided with a Retransmission Authorization, which the FCC requires be kept on file for presentation upon request.

FCC Signal Booster Classifications

- Class A: Designed to retransmit signals on one or more specific channels. Also known as a “channelized” BDA.
- Class B: Designed to retransmit any signals within a wide frequency band. Also known as a “wideband” BDA.

Class B Signal Booster Registration

- The FCC requires compliance with FCC 7CFR90.219 to register both new and existing Class B signal boosters (wideband BDA’s) through the FCC Signal Booster Registration website at: www.fcc.gov/signal-boosters/registration. Any Class B signal boosters not registered will be subject to FCC enforcement action.
- Upon successful registration, the requestor must provide the FCC Booster ID of this device to Countywide Communications System as proof of registration. This information can be emailed to _sheriffccs@co.lucas.oh.us

Signal Booster Technical Requirements

- The Signal boosters must be capable of amplifying APCO Project 25 signals.
- Signal boosters must be capable of amplifying 700 MHz Public Safety Narrowband frequencies (763-775 MHz / 793-805 MHz).
- Signal boosters must be capable of amplifying 800 MHz NPSPAC Band, 800 MHz non-NPSPAC Public Safety/BILT/Non-Cellular SMR Band, 800 MHz Expansion Band, and 800 MHz Guard Band frequencies (806-817 MHz / 851-863 MHz).
- Signal boosters must comply with all applicable fire and electrical codes.
- For all BDA’s that are operating on the CCS, Fire Code Officials cannot waive the hardening requirements or the battery backup requirements of the Fire Code.
- Annual testing is required for all BDA’s per applicable codes and standards.

Countywide Communications System BDA Recommendation

- CCS endorses Class A BDAs that cover the 700 & 800 MHz frequency bands listed above under Technical Requirements.

Section 510 of the Ohio Fire Code requires fire code officials to be capable of providing, upon request, specific technical information and requirements pertaining to their emergency responder communications system. The Countywide Communications System Office is the repository for this information for all its members. Local fire authorities may request this technical information by emailing to: sheriffccs@co.lucas.oh.us

Here are the Steps needed to obtain licensee (CCS) consent and meet FCC regulations for use of signal boosters amplifying Countywide Communications System frequencies:

1. **DESIGN.** A qualified engineering firm conducts a pre-test per NFPA 1221 requirements. **The engineering firm must send a copy of the survey to CCS** sheriffccs@co.lucas.oh.us The BDA vendor/installer designs the system to satisfy the shortcomings identified in the pre-test.
2. **APPROVAL** The vendor/building owner submits the Retransmission Authorization Form (RA) to CCS for approval prior to initiating construction.
3. **PERMIT.** CCS will forward to the AHJ to review the plan. If denied, the vendor will make changes and resubmit. CCS/AHJ reserves the right to request additional information. Per Ohio Fire Code 510.3 a permit is required to install a BDA system. The RA may serve as the permit.
4. **APPROVAL/INSTALLATION.** Upon approval, CCS will return RA to the applicant and installation may commence. Per FCC regulations, the building operator maintains a copy of the RA and presents to an FCC representative or other authorized personnel investigating interference.
5. **TEST.** After installation is complete, the vendor conducts a post-test using the same criteria as the pre-test. **A copy is sent to CCS** sheriffccs@co.lucas.oh.us The AHJ should be present.
6. **COMPLIANCE.** If the system passes the post-test and receives AHJ approval, commissioning begins.