



CHARLOTTE FIRE DEPARTMENT
FIRE PREVENTION BUREAU
Fire Marshal's Office
500 Dalton Avenue
Charlotte, North Carolina 28206

Fire Alarm/Fire Sprinkler Shop Drawing Guidelines

Shop drawings for fire alarm systems and fire sprinkler systems shall be submitted to the Fire Prevention Bureau based on the following criteria:

Fire Alarm Systems:

- For the installation of 5 or more devices.
- The installation of or replacement of the main fire alarm control panel.

For simply replacing existing devices "like for like" with either no or not more than 5 or more additional devices, shop drawing submittal will not be required.

Fire Sprinkler Systems:

- The installation of 20 or more sprinkler heads.
- The installation of a new or replacement fire pump, or new sprinkler riser.
- A change in building use, sprinkler density requirements, or storage commodity class when such conditions will affect the hydraulic demand.

I. Plan Submittal:

Fire alarm systems:

Shop drawing submittal for fire alarm systems shall include, but not be limited to, the following information, in accordance with Section 907 of the North Carolina Fire Code:

1. A floor plan that indicates the use of all rooms.
2. Locations of alarm-initiating devices.
3. Locations of alarm notification appliances, including candela ratings for visible appliances.
4. Location of fire alarm control unit, transponders and notification power supplies.
5. Annunciators.
6. Power connection.
7. Battery calculations.
8. Conductor type and sizes.
9. Voltage drop calculations.
10. Manufacture's cut sheets for equipment, devices and materials.
11. Details of ceiling heights and construction.
12. The interface of fire safety control functions.
13. Classification of supervising station.

Fire sprinkler systems:

Shop drawings for fire sprinkler systems shall include, at a minimum, the following:

1. Cut sheets for sprinkler heads.
2. Hydraulic calculations.
3. Utility plans indicating all below-ground piping and associated connections.
4. Owner's Certificate.
5. Fire hydrant flow test results unless current test is within a 12-month period.

II. Submittal Timeline:

- Shop drawings shall be submitted within 90 days of building permit issuance. Installation shall not take place until plans are reviewed and approved.
- Plans will be reviewed within 15 business days ***from the date the reviewer receives them.*** We will notify the submitter when the review has been completed.

III. Submittal Procedure:

- Beginning January 1, 2023, Charlotte Fire Department will require shop drawings for projects in the Charlotte city limits be submitted through this Electronic Plan Management (EPM) portal. The first web link is to help you with setting up an account and submitting through EPM. The second web link is how to submit an RTAP. **Most shop drawings are to be submitted as an RTAP.** The only time it will be a standalone project is when there is no project in which to attach the shop drawing.
 - 1) <https://www.mecknc.gov/LUESA/CodeEnforcement/Documents/EPM01-CreatinganAccount-ManagingUsers.pdf>
 - 2) <https://www.mecknc.gov/LUESA/CodeEnforcement/Documents/EPM15-RTAPReviewProcess-PackagingSubmittal.pdf>
- **Any resubmittal of plans that were originally submitted through the email portal shall be submitted back through the e-mail portal until approved.**
cfdblansubmittal@ci.charlotte.nc.us
- By using the six-digit project number assigned by the county at time of the original permit application by the architect, the system should recognize the project as a city fire or county fire assignment. Contact either: Cherly.Dean@mecklenburgcountync.gov or Tom.Smith@mecklenburgcountync.gov at the county for additional information. For city fire questions on the submittal contact Jeffory.Wright@charlottenc.gov. The process will be similar to the process used by the Mecklenburg County Fire Marshal's office.
- Contact Ryan Woods at Ryan.Woods@charlottenc.gov to set up a city account. CFD is no longer collecting shop drawing review fees via credit card or online payment using the new submittal system. Submitting company MUST have a city account effective March 1, 2023

IV. Review Application and Fees:

The FY'24 shop drawing fee for fire alarm systems is \$135 and fire sprinkler systems is \$290 per system.

In order to process and complete your review request, you must complete the “Shop Drawing Review Application” form. This form must accompany all shop drawings.