



# TOWN OF SMITHTOWN

## DEPARTMENT OF PUBLIC SAFETY

### FIRE PREVENTION DIVISION

65 Maple Avenue, Smithtown, New York 11787 (631) 360-7553



#### CARBON MONOXIDE SYSTEM PLANS SUBMITTAL/SYSTEM INSTALLATION PROCEDURE

The New York State Fire Prevention and Building Code Council (the Code Council) and the New York Department of State have adopted a rule that amends the Uniform Code by adding provisions requiring the installation of carbon monoxide detection (carbon monoxide alarms or carbon monoxide detection systems) in all new and existing commercial buildings (including, but not limited to, all buildings that contain one or more restaurants). The new Uniform Code provisions are in section 1228.4 of Part 1228 of Title 19 of the Codes, Rules and Regulations of the State of New York (NYCRR).

#### THESE REQUIREMENTS TOOK EFFECT ON JULY 27, 2015

Please review and familiarize yourself with all requirements listed in this document prior to your submittal. Your compliance with these requirements will enable us complete the review process faster and more efficiently, with less chance of rejection due to improper or missing information.

#### REQUIREMENTS ARE SET FORTH IN THE FOLLOWING CODES:

**Codes, Rules and Regulations of the State of New York (NYCRR)**  
**§1228.4 Permits**

Part 1228 of Title 19 NYCRR has been amended by adding a new section, §1228.4, to read as follows:

§1228.4. Carbon Monoxide Detection in Commercial Buildings.

- (a) Introduction. This section 1228.4 covers the provision of carbon monoxide detection, and the application, installation, performance, and maintenance of carbon monoxide alarms and carbon monoxide detection systems, in new and existing commercial buildings.

**Fire Code of New York State**  
**§901.2 Documents and Permits**

The code enforcement official shall have the authority to require construction documents and calculations for all fire protection systems and to require permits be issued for the installation, rehabilitation or modification of any fire protection system. Construction documents for fire protection systems shall be submitted for review and approval prior to system installation.

**Code of the Town of Smithtown**  
**§164-29 Survey of Buildings and Lots and §164-32 Permits Required**

§164-29: The Fire Marshal shall survey each building, lot, structure or business, except the interior of single-family dwellings, and shall specify what fire-detecting devices or -extinguishing appliances shall be provided therein. In special hazardous processes or storage, appliances of **more than one type or special systems may be required.**

§164-32: A permit shall be obtained from the Fire Prevention Division for the installation of any fire alarm, sprinkler or water-spray systems or any other special fire-extinguishing or -**detection systems which may be required** under this article.

**Conformance to Codes**

All carbon monoxide alarm system installations shall conform to Chapter 164 of the Code of the Town of Smithtown [LL#4-1990, Fire Prevention Law (and as may be amended)], the current edition of the Fire Code of New York State, the current referenced edition of NFPA 70 [National Electrical Code], NFPA 720 [Recommended Practice for the Installation of Household Carbon Monoxide (CO) Warning Equipment, the current referenced edition of NFPA 110 [Standard for Emergency and Standby Power Systems], the current referenced edition of NFPA 111 [Standard on Stored Electrical Energy and Standby Power Systems], the current referenced edition of NFPA 1221 [Standard for the Installation, Maintenance and Use of Emergency Services Communications Systems], applicable sections of the current referenced edition of NFPA 72 [National Fire Alarm Code], and any/all other rules, regulations or ordinances whether or not they are specified herein.

**COMPLIANCE REQUIREMENTS**

**Required Detection**

Carbon monoxide detection shall be provided in all new and existing commercial establishments as follows:

- **NEW BUILDINGS:** Installation of a carbon monoxide detection system shall be installed as described herein after first obtaining the required installation permit from the Department of Public Safety Fire Prevention Division.
  - **EXISTING BUILDINGS & ESTABLISHMENTS:** In compliance with the Uniform Fire Prevention & Building Code of the State of New York the following options will be deemed as complying with State and local requirements:
    - 1. Installation of a carbon monoxide detection system as herein described after first obtaining the required installation permit from the Department of Public Safety Fire Prevention Division.
    - 2. Modification of an existing fire alarm system to provide for carbon monoxide detection after first obtaining the required installation permit from the Department of Public Safety Fire Prevention Division.
    - 3. Installation of carbon monoxide alarms in compliance with §1228.4(g) of Title 19 NYCRR. This includes, but is not limited to, the installation of carbon monoxide alarms powered solely by a 10-year battery. Although 10-year battery carbon monoxide detectors that are readily available are primarily for residential and/or institutional sleeping areas, they shall be permitted in commercial spaces provided they are listed to Standard UL 2034. Combination smoke/carbon monoxide alarms will NOT be permitted to satisfy these requirements. No permit is required for the installation of 10-year battery carbon monoxide detectors (see note below).
- **NOTE:** If this option is used for compliance, detection devices shall be in place and maintained operational at all times. As with all required systems and equipment, these devices are subject to inspection by a fire marshal. If devices are found missing or defective in any way, it shall constitute a violation of local law subject to legal action.

**APPLICATION AND INSTALLATION PROCEDURES FOR**  
**CARBON MONOXIDE DETECTION SYSTEMS**

**Section One**  
**CO Plan Submittal**  
**Requirements**

All carbon Monoxide alarm system plan submittals SHALL comply with and/or include the following or they will be rejected:

- 1.** Carbon monoxide detection system plans and specifications shall be developed in accordance with NFPA 720 by persons who are experienced in the proper design, application, installation and testing of carbon monoxide systems. All plans submitted shall bear the stamp/seal of a New York State licensed design professional.
- 2.** Carbon Monoxide detection system designer shall be identified on the system design documents. Acceptable evidence of experience and qualification must include **ALL** of the following:
  - Personnel who are factory trained and certified for carbon monoxide detection system design of the specific type and brand of system being used. Proof of same shall be included with the submittal.
  - Personnel who are certified by a nationally recognized carbon monoxide certification organization. Proof of same shall be included with submittal.
  - A company licensed by the State of New York as per General Business Law Article 6D. Proof of a valid license shall be submitted with the application.
- 3.** Installation personnel shall be qualified or shall be supervised by persons who are qualified in the installation, inspection, and testing of carbon monoxide alarm systems. Acceptable evidence of experience and qualifications or certification shall be provided to this office with the submittal package.
  - Personnel who are factory trained and certified for carbon monoxide detection system design of the specific type and brand of system being used. Proof of same shall be included with the submittal.
  - Personnel who are certified by a nationally recognized carbon monoxide certification organization. Proof of same shall be included with submittal.

- Must be licensed or be employed by a company licensed by the State of New York as Per General Business Law Article 6D. Proof of a valid license shall be submitted with the application.
4. The intended location and use of the structure involved shall be indicated.
  5. Business name, numerical street address and nearest intersection of building shall be indicated.
  6. Main entrance location shall be labeled as such.
  7. Compass point showing building layout shall be drawn.
  8. Plans submitted for review shall deal directly with the type of installation proposed. Where a proposed installation governed by this office is part of a proposed major construction project, a separate plan shall be generated for the proposed installation in lieu of extraction from other plans indicating partial information (i.e.: architectural, plumbing or electrical drawings).
  9. Plans must show all devices within the protected structure that have the potential to produce carbon monoxide.
  10. All HVAC zone must be clearly depicted on the plans submitted.
  11. Provide cross sectional elevation of the building showing ceiling heights and spaces above suspended ceilings, etc. Indicate all conditions which would impact detector spacing and location. Refer to NFPA-720 for criteria. State the type of ceiling being installed (suspended, sheetrock, open joist, etc.).
  12. Name, address and telephone number of person drawing plans and an original stamp of same.
  13. Two (2) sets of stamped carbon monoxide alarm system plans. All plans shall be stamped by a licensed Professional Engineer or a Registered Architect as required by the New York State Department of Education Law.
  14. If, due to the scope of the work proposed, the plans are not required to be stamped, the plans shall be drawn utilizing accepted engineering practices and procedures. All line work and lettering shall be clear and legible.
  15. Two (2) sets of device cut-sheets. Manufacturer's specification, technical and installation sheets for all components of proposed systems shall be included in the plan submission. Exact copies will be accepted. All component parts shall be tested and approved/listed by a nationally recognized testing laboratory for the function intended.
  16. If component parts from different manufacturers are to be mixed in any system, then a manufacturer's statement of compatibility of said parts shall be included in the submission.
  17. If a submitted cut sheet shows multiple devices and options, the exact device and/or option to be used shall be circled, highlighted or called out.

**18.** Wire-Specifications for wire used in the installation shall include NYS Department of State Toxicity Numbers.

**19.** Application is to be completed in its entirety. If there are any blank or illegible sections the submittal will be rejected.

**20.** You must indicate the method of communication from the CMDCP to the central station in your submittal.

**21.** Electronic copy of plans and cut-sheets are to be submitted in PDF form which can be e-mailed to [fire@tosgov.com](mailto:fire@tosgov.com). A memory stick or CD containing same can be included with the submittal.

**22.** Fee of \$250.00 (checks made payable to the Town of Smithtown).

- Fees are established as per §164-152 of the Code of the Town of Smithtown.
- Fees for installation permits of any kind required by chapter 164 of the Code of the Town of Smithtown shall cover initial plans review and approval and not more than two (2) compliance inspections. If additional inspections are needed due to inaccurate submissions, improper installations or defective equipment, an additional fee equal to the original application fee shall be required, and shall permit up to two (2) additional inspections.
- If submitted plans for an installation permit of any kind required by the Town Code are disapproved and/or denied by the fire marshal for a cause, a resubmission may be required. No more than two (2) such resubmissions shall be permitted without an additional fee equal to the original application fee, which shall permit up to two (2) submittals of plans for the same installation permit sought.

**23.** Submittals must include the appropriate prepaid mailer so we can return the plans to you. If you fail to include the mailer, the plans will be available at The Town of Smithtown Department of Public Safety and will have to be picked up.

**24.** Letter from central station stating the following:

- “We are aware that the responding fire department for this account is the (fill in the appropriate fire department name).”
- “We are aware that the only acceptable telephone number to contact the (fill in the appropriate fire department name) is (contact this office for the proper phone number).”
- “We are aware that we are not permitted to change this information without written permission from the Town of Smithtown Fire Prevention Division and that failure to comply with this will result in legal action against us and/or our subscriber.”
- “We will promptly report all trouble signals, failures to test and alarm activations on this account to the Smithtown Fire Marshal via email at [fire@tosgov.com](mailto:fire@tosgov.com).”

- “If we are terminating the subscribers monitoring for any reason, we will notify the Fire Prevention Division in writing at least fifteen (15) days prior to the actual termination.”
- “If the subscriber requests termination of monitoring, we will notify the Smithtown Fire Marshal in writing at least 15 days prior to terminating central station monitoring of the subscribers system.”

**25.** The Town of Smithtown will not approve the installation and use of any panel that requires codes, keys or special knowledge to operate or reset.

**26.** Carbon monoxide detection system shall be either a stand-alone system or integrated into a fire alarm system.

- NOTE: If a fire alarm system is not capable of annunciating BOTH a Temporal 3 AND a Temporal 4 pattern, then that system cannot be used for fire and carbon monoxide detection.

**27.** Carbon monoxide detection equipment shall NOT be integrated into a burglar alarm system.

**28.** Must notate that the strobes will remain flashing on system silence.

**29.** Must notate that any/all remote annunciators will be incapable of controlling the fire alarm and will be for zone/device identification only.

**30.** Must notate that any/all key required to reset all components of the carbon monoxide alarm system will be left on site.

**31.** For all plan revisions; the revision number, date and revision description shall be noted on the plans. All revisions will be called out and readily visible. No hand drawn additions to the plans will be accepted.

**32.** Plans shall be drawn to an established scale. Care is to be taken to insure that plans are reproduced on a 1:1 scale so as to avoid any distortions or variations. NO plans will be accepted with a scale less than 1/8"=1'0".

**33.** All plans shall have an area of at least forty (40) square inches available for approval stamps. This area shall be a clearly defined quadrangle with no side less than six inches in length.

**34.** Where details are required to be shown, they shall be shown as a drawing detail and not as a note indicating compliance. Riser diagrams shall be shown on a separate sheet.

**35.** Plans are to include a legend explaining the symbols being used to identify devices and components on plans.

- NOTE: This legend is to be on each page of the plans including the riser diagram.

**36.** Licensed contractor name, address, contact person and 24 hour telephone number in case of emergency or problem.

**37.** All detectors located in concealed areas and spaces shall have remote indicating lights mounted in a clearly visible area as close as possible to the location of the detector.

**PLANS SUBMITTED WITHOUT THE ABOVE LISTED ITEMS 1-37 WILL BE REJECTED.**

**Section Two**  
**Additional**  
**Requirements**

The following additional requirements shall also be met:

**1.** All proposed devices and components of the CO detection system shall be listed as per §3.2.4 of NFPA 720.

**2.** Carbon Monoxide detectors shall be installed in accordance with the manufacturer's published instructions in the following locations:

- On the ceiling in the same room as permanently installed fuel-burning appliances.
- Centrally located on every habitable level and in every HVAC zone of the building.

**3.** The selection and placement of carbon monoxide detectors shall take into account both the performance characteristics of the detector and the areas into which they are to be installed to prevent nuisance alarms or improper operation after installation.

**4.** Unless specifically designed and listed for the expected conditions, carbon monoxide detectors shall not be installed where any of the following ambient conditions exist:

- Temperatures below 32°F
- Temperatures above 100°F
- Relative humidity outside the range of 10 to 95%.

**5.** Provide, on a separate sheet, battery calculations including 24-hour stand-by, five minute alarm time and 20% deterioration factor. Show minimum requirements and size of batteries to be installed to meet or exceed these requirements.

**6.** Plans shall show the location of all devices within the subject structure that have the potential to produce CO.

**7.** The method(s) of interconnection between the carbon monoxide detection system and controlled electrical and mechanical systems shall be monitored for integrity in accordance with §4.4.6 of NFPA 720; shall comply with the applicable provisions of NFPA 70 (the National Electrical Code), Article 725; and shall be achieved by one of the following recognized means:

- Electrical contacts listed for the connected load
- Data communications over signaling line circuit(s) dedicated to the carbon monoxide detection system
- Other listed method



- 8.** Upon activation of a CO detector, the CO producing appliance closest to that detector shall shut down immediately.
- 9.** Manual reset switch for each CO producing device.
- 10.** System designers shall consider the spread of carbon monoxide through an occupancy via the HVAC system.
- 11.** Interaction with smoke control systems, if such is provided, shall be coordinated.
- 12.** In protected premises with more than one notification zone, a single open, short-circuit, or ground on the system installation conductors shall not affect operation of more than one notification zone.
- 13.** Activation of a carbon monoxide detector shall result in the sounding of a temporal 4 tone pattern throughout the zone boundaries for the activated carbon monoxide detector.
- 14.** The audible alarm signal shall be synchronized within the notification zone.
- 15.** If an emergency voice/alarm communications system is installed for the purpose of occupant notification related to carbon monoxide detection, it shall comply with the requirements of Section 6.9 of NFPA 72, National Fire Alarm Code, excluding the requirements in §6.9.10.4.
- 16.** Carbon monoxide systems shall be arranged to annunciate alarm, supervisory and trouble signals in accordance with §4.4.5 of NFPA 720 (2009).
- 17.** Shunt is to be installed that will shut down all music systems in the establishment. Music systems will not reset until the carbon monoxide system has been reset.
- 18.** Notification appliances used for carbon monoxide signaling shall not have the word FIRE, or any fire symbol, in any form (i.e., stamped, imprinted, etc.) on the appliance visible to the public.
- 19.** Weather proof appliances used for carbon monoxide signaling on the exterior of the building shall not have the word FIRE, or any fire symbol, in any form (i.e., stamped , imprinted, etc.) on the appliance visible to the public.
- 20.** Carbon Monoxide Detection Control Panel (CMDCP) or a remote annunciator shall be installed at the main entrance in a manner where it is readily visible and readable from the exterior of the building. This remote annunciator will not be capable of controlling any function of the fire alarm system and will be for annunciation only.
- 21.** Remote annunciator shall be labeled to indicate the device that is in alarm and the appliance it was installed to protect.
- 22.** Circuit breaker and panel number as well as the central station account number are to be noted on the inside of the CMDCP door.



**23.** Indicate the type and location of alarm transmitting equipment. All transmitting equipment shall have two telephone lines available and be listed for commercial fire applications.

**24.** Indicate amount, location of all carbon monoxide detectors.

**25.** All carbon monoxide detectors to be used shall be equipped with a steady red indicator light that illuminates upon activation. Light must remain illuminated until panel is reset.

**26.** Indicate the amount and type(s) of initiating device circuits.

**27.** Indicate the amount and type(s) of indicating appliances and circuits.

**28.** Indicate number, type and location of supervisory initiating devices and circuits.

**29.** Indicate the amount, type and location of any other circuits, devices, controls and connections.

**30.** 24-hour emergency service telephone number for the alarm contractor is to be conspicuously posted on the alarm panel. The alarm contractor must be available for 24-hour service on this system.

**31.** 24-hour central station contact number is to be conspicuously posted on the alarm panel.

**32.** All spaces located on the plans shall be labeled as to their use and shall show entry and exit points.

**33.** All spaces located on the plans shall be labeled with dimension or square footage.

**34.** The electronic copy of the plans submitted shall be retained on file by the Fire Marshal's Office.

**35.** A copy of the plans will be stamped and returned as "Fire Marshals Inspectional Copy". This copy shall remain on the job site throughout the installation and until such time as the system is tested and approved by the Fire Marshal.

**36.** An as-built set of plans shall be maintained on site, in an appropriately sized tube installed within 3 feet of the CMDCP. In situations where the CMDCP is in a public area, the tube shall be installed near the electrical panel.

- If the proposed work is not started and completed within twelve (12) months of the plan approval, then the approval is void and revoked. At that point new plans and fees must be submitted.
- Any request to discuss plans or submittals shall be made to this office in advance. The Fire Marshal responsible for reviewing the plans shall be contacted and a meeting date/time can be set. Plans will not be reviewed immediately upon receipt by the Fire Prevention Division. Although plans will be reviewed as quickly as possible, a period of fifteen to twenty (15-20) working days should be expected for a review.

- The contractor's request for final inspection and approval must be made in writing and include all necessary paperwork (see requirements listed below) submitted to the Fire Marshal's Office prior to witnessing of said test.
  - Completed carbon monoxide system Record of Completion which can be obtained online.
  - Affidavit of compliance. Must be on official letterhead and state that the carbon monoxide alarm system has been installed as per the approved plans and is in full compliance with all applicable codes rules and regulations.
- Affidavit must also state that only class A circuits were used and that all work was performed by the applicant and his direct employees.

**NOTE:** *If your submittal is only for a central station update or change, you need only submit a completed application, the proposed date of the change, the reason for the change, the old central station name, letter complying with item 24 on page 4 and item 23 on page 8 of this document, and the \$250.00 fee.*

**Section Three**  
**Violations, Penalties**  
**and Enforcement**

Any work done without approved plans and/or a proper permit is subject to the penalties outlined in the Code of the Town of Smithtown for any violation of the local fire prevention law.

If work is found to have commenced without approved plans and/or a proper permit, this office reserves the right to shut down any/all portions of the project deemed necessary to inspect, investigate and confirm that work has been done. If any portion of the work performed is not clearly visible or readily accessible, you will be ordered to demolish, disassemble or remove any and all obstructions regardless of the cost incurred. Failure to comply may result in the suspension and/or revocation of any other building permits related to the site and/or project.

Working without an approved set of plans and/or prior to receiving the proper permit is a crime under New York State Law. This office can and will initiate the appropriate legal action for violation(s) of state and local law(s) including the issuance of summons and/or arrest.

**SMITHTOWN FIRE PREVENTION LAW**  
**§164-164. Penalties of offences; enforcement.**

**A.** A person who violates any of the provisions of or who fails to comply with any condition imposed by this chapter shall have committed a violation punishable by a fine not exceeding \$2,500 or imprisonment for not more than 60 days, or both, for a conviction of the first offense and punishable by a fine of \$5,000 or imprisonment for not more than 90 days, or both, for conviction of a second or subsequent offense. A separate offense shall be deemed committed upon each day during or on which a violation occurs or continues.

**B.** The Town Attorney is authorized and directed to institute any and all actions and proceedings necessary to enforce this chapter. The Town Attorney is also authorized to seek damages and any civil penalties in any civil action, and such penalties shall be in addition to and not in lieu of any criminal prosecution and penalty.

1. In the event of any actual or pending violation of this chapter, the Town Attorney may, in addition to other remedies, institute any appropriate action or proceedings to prevent, restrain, correct or abate such violation.
2. In addition to other remedies provided by law, any appropriate action or proceeding, whether by legal process or otherwise, may be instituted or taken to prevent the unlawful erection, construction, reconstruction, alteration, repair, conversion, maintenance or use to restrain, correct or abate such violation, to prevent the occupancy of said building, structure or land or to prevent any illegal act, conduct, business or use in or about such premises.
3. In addition to any fine or penalty imposed, the defendant shall pay all costs and expenses incurred by the Town in determining such violation.

**Section Four**  
**Submission**

Applications, plans, required documents and fees may be submitted via the United States Postal Service (USPS), FedEx, United Parcel Service (UPS), etc. or in person to:

**TOWN OF SMITHTOWN**  
**DEPARTMENT OF PUBLIC SAFETY**  
**FIRE PREVENTION DIVISION**  
**65 Maple Avenue**  
**Smithtown, NY 11787**

(631) 360-7553  
Fax (631) 360-7677  
e-mail: fire@tosgov.com

**FREQUENTLY ASKED QUESTIONS**

**Question** What is the purpose of a carbon monoxide detection system?

**Answer** The purpose of carbon monoxide detection systems shall be primarily to provide notification of carbon monoxide, and trouble conditions; to alert the occupants; and to summon aid from the local fire department.

**Question** Where is carbon monoxide detection required under this new law?

**Answer** Under the newly amended NY Executive Law Section §378, General rule. Carbon monoxide detection shall be provided in accordance with the provisions of this section §1228.4 in every commercial building that (i) contains any carbon monoxide source (including, but not limited to, any garage or any other motor-vehicle-related occupancy) and/or (ii) is attached to a garage and/or (iii) is attached to any other motor-vehicle-related occupancy. These requirements shall apply without regard to whether such commercial building is an existing commercial building or a new commercial building and without regard to whether such commercial building shall or shall not have been offered for sale.

**Question** Are there any exceptions to this new code requirement?

**Answer** Exceptions are as follows:

(1) Carbon monoxide detection shall not be required under this section §1228.4 in a commercial building that is (a) classified, in its entirety, in Storage Group S or Utility and Miscellaneous Group U under Chapter 3 of the 2010 BCNYS and (b) occupied only occasionally and only for building or equipment maintenance.

(2) Carbon monoxide detection shall not be required under this section §1228.4 in a commercial building that is a “canopy” (as that term is defined in the 2010 FCNYS).

**Question** In addition to codes, rules and regulations discussed in this document, what other references and codes must be followed when installing carbon monoxide detection?

**Answer** As cited in the New York State Fire Code, the installation must fully comply with the applicable sections of the following:

- UL 2034. The term “UL 2034” means the publication entitled “Single and Multiple Station Carbon Monoxide Alarms” published by the Underwriters Laboratories, Inc. (publication date: February 28, 2008).
- UL 2075. The term “UL 2075” means the publication entitled “Standard for Gas and Vapor Detectors and Sensors” published by the Underwriters Laboratories, Inc. (publication date: March 5, 2013).
- UL 217. The term “UL 217” means the publication entitled “Standard for Single and Multiple Station Smoke Alarms” published by the Underwriters Laboratories, Inc. (publication date: August 25, 2006).
- UL 268. The term “UL 268” means the publication entitled “Smoke Detectors for Protective Signaling Systems-with Revisions through January 1999” published by the Underwriters Laboratories, Inc.

Terms defined elsewhere. Terms that: (i) are used in this section 1228.4, (ii) are not defined in this subdivision, and (iii) are defined in the 2010 BCNYS, the 2010 FCNYS, the 2010 RCNYS or NFPA 720 shall have the meanings ascribed to those terms by the 2010 BCNYS, the 2010 FCNYS, the 2010 RCNYS or NFPA 720, as applicable.

**Question** When is a permit required in regards to carbon monoxide systems?

**Answer** A permit shall be required when:

- Required by law or ordinance
- A change of use for a particular premise occurs.
- Renovation of the premise occurs.
- Any fire alarm or fire, smoke and carbon monoxide detection system is renovated, improved or changed in any way.
- Central Station monitoring is changed.