



COSUMNES COMMUNITY SERVICES DISTRICT

FIRE DEPARTMENT

8820 Elk Grove Blvd. Elk Grove, CA 95624

(916) 405-7100

[CosumnesCSD.gov/Fire](https://cosumnescsd.gov/Fire)

FIRE PREVENTION CONSTRUCTION STANDARDS CO2 SYSTEMS PLAN SUBMITTAL REQUIREMENTS

Standard Number: FPCS-1020
Original Effective Date: 9/7/2022
Revision Date: 10/11/2024
Code Section: 2022 California Fire Code, 2019 NFPA 55

STANDARD

1020.1 The California Fire Code provides minimum standards for the installation and use of insulated liquid carbon dioxide systems with more than 100 pounds of carbon dioxide (CO₂) used in beverage dispensing applications.

Carbon dioxide systems used for other than beverage dispensing systems is not covered by this standard

PURPOSE AND SCOPE

1020.2 To provide architects, engineers, business owners, suppliers, and contractors the minimum information required for plan submittal and permitting of refrigerated and non-refrigerated carbon dioxide systems.

APPLICATION

1020.3 Electronic Plan Submittal

- a. Refer to the Cosumnes Community Services District ("District") [website](https://www.cosumnescsd.gov/303/Plan-Review-and-Inspections) at <https://www.cosumnescsd.gov/303/Plan-Review-and-Inspections> for "How To" guides for submitting plans through the online portal.

1020.4 Required Construction Documents – Site Plan, Floor Plan, and Details

- a. Provide a scaled architectural site plan and floor plan showing the following information:
 1. Provide address and suite number of project location.
 2. Provide a scope of work statement.



3. Provide number of cylinders and tanks.
4. Provide quantity of gas (in lbs.) of carbon dioxide cylinders and tanks.
5. Indicate how carbon dioxide cylinders will be secured from tipping.
6. Indicate how carbon dioxide tanks will be bolted to the floor.
7. Indicate how carbon dioxide system storage tanks, cylinders, piping, valves, and fittings will be protected from damage by occupants and equipment.
8. Indicate location of exterior fill, as applicable.
9. Indicate location of all pressure relief valves, as applicable.
10. Indicate on the plan if the location of the carbon dioxide system will be provided with a mechanical ventilation system or a gas detection system and emergency alarm system, or both.
11. Indicate on the plan the location of the gas detection system and emergency alarm system monitoring panel.

1020.5

Required Construction Documents – Additional

- a. In addition to the floor plan and site plan please provide additional information as follows:
 1. Submit plumbing plans showing the location of all carbon dioxide distribution piping and the point-of-use for all use areas. Installed distribution piping shall be labeled for the type of gas and direction of flow.
 2. Submit mechanical plans showing how mechanical ventilation meets the minimum code requirements, as applicable.
 3. Provide electrical plans showing the location and design of the gas detection system and the emergency alarm system and all associated system components, as applicable.
 4. Submit manufactures specification sheets for the gas detection system and emergency alarm system and all associated system components, as applicable.
 5. Submit safety data sheets (SDS) for carbon dioxide gas.
 6. Indicate how the room or cabinet will be conspicuously labeled.
 7. Indicate the location(s) of NFPA 704 signs and list the hazard rankings.
 8. Indicate the location(s) and verbiage of all the emergency shut off signs.



1020.6 **Inspection**

- a. A fire department inspection is required before use of the beverage dispensing system. To request a fire department inspection, please visit the District's website at: <https://www.cosumnescsd.gov/303/Plan-Review-and-Inspections>
- b. A fire inspector will contact you to schedule an appointment. Be sure to have your approved plans and permit available for the inspection.

REFERENCES

(As adopted by the state and by local ordinance)

1020.7 California Fire Code

1020.8 National Fire Protection Association (NFPA) 55, *Compressed Gases and Cryogenic Fluids Code*