



# CITY OF LONG BEACH

COMMUNITY DEVELOPMENT DEPARTMENT  
411 West Ocean Blvd 2<sup>nd</sup> Floor, Long Beach CA 90802

## FIRE REVIEW PLAN CHECKLIST – NFPA 72 FIRE ALARMS

Date:

Project Name:

Address:

Permit Number:

Plan Reviewer: [@longbeach.gov](mailto:longbeach.gov); (562)570-

The plans submitted for the project referenced above have been reviewed. The information or corrections identified below are needed to demonstrate compliance with 2022 California Building and Fire Codes (CBC/CFC), CCR Title 19, Title 18 of the Long Beach Municipal Code, adopted standard and policies, and best practices utilized by The City of Long Beach.

### A. ADMINISTRATION (Permits that begin with the letter “F”)

To streamline the plan review process, please follow the steps outlined below to ensure that there is no delay in processing your application and reviewing your responses to these plan check corrections.

- Resubmittal of corrected plans, documents and calculations shall incorporate or address all required corrections from email correspondences, redlined plans and this plan check corrections document. Provide a separate written response to each correction comment and show where and how it has been addressed. Cloud all corrections to the plans; Identify the sheet number and detail or reference note on the corrected plans that show where corrections have been made. Time spent searching for corrections will delay the review and approval process. Refer to email instructions for resubmittal of PDF’s and documents.
- Should you have any questions or need clarification pertaining to correction comments made on your project, you may contact the plan check staff that reviewed your plans via email and/or telephone from 7:30am to 4pm; Monday – Friday.
- Resubmit via email directly to the plan checker that sent you the corrections. We will ensure that the resubmitted documents will proceed as expeditiously as possible. If an impasse is reached during the recheck, you may request that the plan check supervisor be summoned for a 2nd opinion or to attempt to resolve and/or clarify the matter.

- Major revisions to approved plans that necessitate additional review time may be subject to resubmittal and additional plan check fees as authorized by Section 18.06.030 of the Long Beach Municipal Code.
- Reviewed plans and/or calculations not addressed past the expiration date of the permit application will require a new permit application form if you want to continue with the permit.
- Pursuant to LBMC Section 18.04.060 and as amended by City Council Resolution, the plan check for your project shall expire after one (1) year and six (6) months from the date the plan check fees were paid to review your project. The plan review for your project will expire on \_\_\_\_\_. If the plan review for your project is expired, no permit will be issued. A new plan check for your project along with new plan check fees will be required to continue the project. Prior to plan check expiration, the Building Official may consider granting an extension of time not to exceed one hundred eighty (180) days when justifiable cause is demonstrated. For additional information, please refer to the “Plan Check Extension Request Form” located on our department website at [longbeach.gov/lbds/forms](http://longbeach.gov/lbds/forms).
- The final set of construction documents must be stamped by the following department/bureau/agency:
  - Fire Plan Check Only
- The address of the project and the name/address of the owner/applicant are required on the first sheet or title sheet of the construction documents.
- Provide complete engineer and architect information on the first or title sheet of the construction documents.
- Provide a building data section.
  - Scope of work, clearly identify on the plans all areas of work
  - Occupancy classification (CBC Chapter 3)
- Remove all plans, details or notes that do not pertain to the project from the final set of construction documents.
- Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of the Fire Code and relevant laws, ordinances, rules and regulations as determined by the fire code official. (CFC § 106.2.1)
- One final electronic set of construction documents will be required during permit issuance. Construction documents must be:
  - Clear electronic .pdf drawings with no background color
  - Scaled floor plans, including north reference

- When all required approvals are obtained, the permit application must be signed by the licensed contractor, or authorized agent at the time the permit is to be issued.

### **2022 Long Beach Fire Alarm Verbatim Notes (add to plans)**

1. Any fire alarm system not required by this code, or the California Building Code shall be furnished for complete protection and meet all requirements of this code and the California Building Code, unless approved by the Fire Code Official.
2. Inspections are required for this project. Please schedule all field inspections at least 48 hours in advance. Call inspection scheduling at (562) 570-2587 and provide the permit number from these plans.
3. The scope of work shall be tested by the installer prior to the Fire inspection to determine the system properly functions as approved on the plans.
4. Upon completion of the Fire Alarm System installation, a satisfactory test of the entire system shall be made in the presence of the Long Beach Fire Department.
5. This system was designed and installed under the 2022 California Building and Fire Codes and under NFPA 72, 2022 edition requirements.
6. The documentation stated in 7.5.3.1 shall be delivered to the owner or owners' representative upon final acceptance of the system. (NFPA 72 § 7.5.3.2)
7. Inspection, testing and maintenance shall be performed and maintained per Chapter 14 of NFPA 72 and the manufacturer specifications.
8. The fire alarm contractor shall provide all testing equipment necessary for inspection of Low Frequency Sounders, Heats, Smokes, etc.
9. If applicable: Proposed system shall be provided with 520 Hz low frequency devices as per NFPA 72. Contractor shall provide a low frequency meter at time of final fire acceptance testing for audibility verification.
10. All smoke detectors, including duct detectors, shall be tested with smoke. Refer to the smoke detector manufacturer for type of smoke. (NFPA 72, Table 14.4.3.2)
11. Inspection, testing and service personnel shall be qualified and experienced per NFPA 72 § 10.5.3.
12. All fire alarm and/or signaling system modifications made after the initial installation shall be recorded on a revised version of the original completion documents (as-builts). The modifications shall not be started until the new plans are approved. (NFPA 72 § 7.5.6.6, CFC § 105.6.6, 901.2)
13. When the Fire Alarm Control Unit (FACU) panel is in a room accessed through a door, a permanent sign shall be provided on the door indicating, "Fire Alarm Control Unit" or equivalent. When there are sub-panels, door signs shall also indicate where the main FACU panel is located.
14. Fire alarm locked panel shall be accessible only to Fire Dept. personnel, authorized maintenance personnel and shall be marked "Fire Alarm Control Unit".

15. Electric power circuits supplying fire alarm systems shall be dedicated branch circuit(s). The circuits shall be mechanically protected capable of being locked in the on position with an approved mechanical clip. Circuit disconnect means shall have a "Red Marking", accessible to only authorized personnel and be identified as "Fire Alarm Circuit. The location of the circuit disconnect means shall be permanently identified at Fire Alarm Control Panel.
16. A 24-hour emergency response phone number shall be permanently posted at the control panel.
17. Storage batteries shall be marked with the month and year of manufacture. (NFPA 72 § 10.6.10.1.1)
18. Where the battery is not marked with the month/year by the manufacturer, the installer shall obtain the date-code and mark the battery with the month/year of battery manufacture. (NFPA 72 § 10.6.10.1.2)
19. The secondary power supply for the protected premise system shall have sufficient capacity to operate the system under quiescent load (system operating in nonalarm condition) for a minimum of 24 hours. (NFPA 72 § 10.6.7.2.1)
20. At the end of the period in 10.6.7.2.1, the secondary power supply shall be capable of operating all alarm notification devices used for evacuation or to direct aid to the location of an emergency for 5 minutes, unless otherwise permitted or required by 10.6.7.2.4 (NFPA 72 § 10.6.7.2.2)
21. Battery charging equipment shall be provided to recharge batteries within 48 hours after fully charged batteries have been subject to a single discharge cycle as specified in 10.6.7.2. (NFPA 72 § 10.6.10.3.2)
22. Failure of a battery charger shall result in a trouble signal in accordance with Section 10.15. (NFPA 72 § 10.6.10.6.2)
23. Actuation of alarm notification appliances or emergency voice communications, emergency control function interface devices, and annunciation at the protected premises shall occur within 10 seconds after the activation of an initiating device. (NFPA 72 § 10.11.1)
24. The alarm signals shall be audibly distinctive from all other different types of audible systems or alarms. (NFPA 72 § 10.10)
25. All audible alarm notification signals shall be a three-pulse temporal pattern as described in NFPA 72. (CFC § 907.5.2.1.4)
26. The audible alarm notification appliances shall provide a sound pressure level of 15 dBA above the ambient sound level or 5 dBA above the maximum sound level having a duration of not less than 60 seconds, whichever is greater, in every occupiable space within the building. (CFC § 907.5.2.1.1)
27. Audible alert and evacuation signal tones, including those that precede or follow voice messages, shall meet the requirements of 18.4.4, 18.4.5, 18.4.6 or 18.4.7, as applicable. (NFPA 72 § 18.4.1.5 and ANSI S3.41)
28. The voice message shall meet intelligibility requirements per NFPA 72 § 18.4.11.
29. Visual notification appliances shall be installed in accordance with Table 18.5.5.7.1 (a) or Table 18.5.5.7.2 (b). (NFPA 72 § 18.5.5.7.2)
30. In corridors where more than two visual notification appliances are in any field of view, they shall flash in synchronization. (NFPA 72 § 18.5.5.8.7)
31. Manual pull station key(s) must be placed in the Knox Box.

32. Where a building fire alarm system or is installed, automatic fire-extinguishing systems shall be monitored by the building fire alarm or water flow system in accordance with NFPA 72 and CFC § 904.3.5.
33. Power limited cable which is run within 7 feet of the finished floor must be protected from physical damage.
34. Fire Alarm circuits shall be grounded in accordance with California Electrical Code Article 250.
35. Elevator recall shall operate per the signals found in sequence of operations on this plan. (NFPA 72 § 21.3)
36. Supervising station change of service. Supervising station customers or clients and the AHJ shall be notified in writing by the new supervising station within 30 calendar days of any change of service provider that results in signals from the client's property being handled by a new supervising station. (NFPA § 26.2.7)
37. Carbon Monoxide requirements from the 2022 California Fire Code (CFC) Section 915, are solely plan reviewed and inspected by the City of Long Beach Building Safety Department, and not reviewed or inspected by the City of Long Beach Fire Department. California Health and Safety Code § 17926 requires existing buildings to meet Section 915.
38. Group R2 Pre-wire requirements – No prewire required inside each dwelling unit, unless installed. At a minimum provide wiring up to a junction box or “new power supply” terminated outside dwelling unit or in dwelling unit closet where electrical panels are installed, provide separate breaker slot for fire alarm additional Power Supply or J box install. Provide worst case battery and voltage drop calcs for the additional visual alarm notification appliances for ADA to power supply to be installed now, or battery calcs for future new power supply.

## **B. CHECKLIST**

1. Shop drawings for fire alarm systems shall be prepared in accordance with NFPA 72 Section 7.4 and submitted for review and approval prior to system installation. (CFC § 907.1.2)
2. Shop drawings shall include the following information (NFPA § 7.4):
  - a. Name of protected premises, owner, occupant
  - b. Name of installer or contractor
  - c. Location of protected premises
  - d. Device legend and symbols in accordance with NFPA 170, or other symbols acceptable to the AHJ
  - e. Date of issue and any revision dates.
3. Provide the correct state codes, standard and sections for alarm design. The applicable codes and standards are the 2022 California Fire Code (CFC), 2022 California Building Code (CBC), 2022 California Electrical Code (CEC) and 2022 NFPA 72.

4. Provide the building code occupancy classification and use designation. (CBC § 302)
5. Any fire alarm system not required by this code or the California Building Code shall be furnished for complete protection and meet all requirements of this code and the California Building Code, unless approved by the fire code official. (LBMC § 18.48.530 (CFC § 907.1.6))
6. Buildings over 3 stories may be required to provide building evacuation based on the floor of alarm, the floor above and the floor below, in lieu of a general alarm, at the discretion of the Fire Code Official. (LBMC § 18.48.530 (CFC § 907.1.7))
7. Fire alarm system control panels, including sprinkler monitoring panels, shall be utilized for connecting and supervising fire alarm and/or fire related equipment only. Security or similar devices shall not be connected to a fire alarm or sprinkler monitoring control panel. The use of control panels capable of this feature is subject to the following: (LBMC § 18.48.530 (CFC § 907.1.8))
  - a. The owner of the facility where the panel is being installed shall provide an original letter, on company letterhead, to the Long Beach Fire Department stating that not now, nor in the future, will security or similar equipment be connected to the fire alarm or sprinkler monitoring control panel.
  - b. New and/or existing control panels installed after the adoption of this ordinance found to be in violation of this requirement shall be subject to corrective action, as determined by the Fire Code Official.
8. Remote annunciator. A remote annunciator shall be provided at the main entrance, the first suite in a multi suite building, or in a location as approved by the Fire Code Official. The remote annunciator shall have the capability to silence and reset the system via a key located in the Knox box, or other approved means. (LBMC § 18.48.530 (CFC § 907.1.9))
9. Remote annunciator. A remote annunciator shall be provided at the main entrance, the first suite in a multi suite building, or in a location as approved by the Fire Code Official. The remote annunciator shall be key operated and have the capability to silence and reset the system, or by other approved means. The visual description shall lock in until the system is reset and shall not be cancelled by the operation of an audible alarm-silencing switch. (LBMC § 18.48.500 (CFC § 903.4.2))
10. Alarms. Where fire alarm systems are installed in non-sprinklered buildings an exterior horn and strobe device shall be installed and located on the address side of the building closest to the location of the remote annunciator. (LBMC § 18.48.530 (CFC § 907.1.10))

11. Minimum required documentation. The following list shall represent the minimum documentation required for new systems and additions or alterations to existing systems: (NFPA § 7.2.1)
- a. Written narrative providing intent and system description
  - b. Riser diagram
  - c. Floor plan layout showing location of all devices, control equipment, and supervising station and shared communications equipment with each sheet showing the following:
    - d. Point of compass (north arrow)
    - e. A graphic representation of the scale used
    - f. Room use identification
    - g. Building features that will affect the placement of initiating devices and notification appliances
    - h. Sequence of operation in either input/output matrix or narrative form
    - i. Equipment technical data sheets
    - j. Manufacturers' published instructions, including operation and maintenance instructions
    - k. Battery capacity and safety margin calculations
    - l. Voltage drop calculations for notification appliances
    - m. Mounting height for wall-mounted devices and appliances
    - n. Where occupant notification is required, minimum sound pressure levels that must be produced by the audible notification appliances in applicable covered areas
    - o. Locations of alarm notification appliances, including candela ratings for visual alarm notification appliances
    - p. Pathway diagrams between the control unit and shared communications equipment within the protected premises
    - q. Completed record of completion in accordance with Section 7.5.6
    - r. For software-based systems, a copy of site-specific software, including specific instructions on how to obtain the means of system and software access (password)
    - s. Record (as-built) drawings
    - t. Records, record retention, and record maintenance in accordance with Section 7.7
    - u. Completed record of inspection and testing in accordance with Section 7.6.6
12. All signals shall transmit to the remote annunciator and supervising station with each device's specific location, type and address. (LBMC § 10.48.470 (CFC § 903.4.1))
13. Duct smoke detectors. Smoke detectors installed in ducts shall be listed for the air velocity, temperature and humidity present in the duct. Duct smoke detectors shall be connected to the building's fire alarm system or sprinkler monitoring system, when one is installed. Activation of a duct smoke detector shall initiate a visible and audible supervisory signal at a constantly attended location and shall

perform the intended fire safety function in accordance with this code and the California Mechanical Code. Duct smoke detectors shall not be used as a substitute for required open area detection. (LBMC § 10.48.540 (CFC § 907.3.1))

14. In occupancies not required to be equipped with a fire alarm or sprinkler monitoring system, actuation of a duct smoke detector shall activate a visible and audible signal in an approved location. Duct smoke detector trouble condition shall activate a visible or audible signal in an approved location and shall be identified as an air duct detector trouble. (LBMC § 10.48.550 (CFC § 907.3.1))
15. All existing multi-family residential, hotels, motels and high-rise buildings shall upgrade the existing fire alarm system to current code, at the time of replacement of the existing non-functioning fire alarm control panel. (LBMC § 10.48.560 (CFC § 907.11))
16. Provide section view(s)
17. Provide current State Fire Marshal (SFM) Listings. (CFC § 907.1.3)
18. Provide the central or remote station monitoring company name, address, phone number, UL Listing number & certificate. (NFPA 72 § 26.3.4.2)
19. Include in the Sequence of Operation the cellular monitoring points: 1) Radio Communications Failure Condition (RFC) (Supervisory), 2) Low/Missing Battery Condition (Trouble), 3) AC Failure Condition (Trouble). (NFPA 72 §
20. Provide specifications and details of through-penetration fire stopping, if required. (CBC § 714)
21. The exterior alarm device shall be a horn and strobe device or speaker and strobe (for voice evacuation systems), located on the address side of the building 10 feet above grade with no building obstructions and closest to the location of the fire department connection. If no FDC, the device shall be located closest to the annunciator. (LBMC § 10.48.480 (CFC § 903.4.2))
22. At least one (1) additional horn and strobe device is required on the interior of a building at the main entrance or in a location as approved by the fire code official. (LBMC § 18.48.490 (CFC § 903.4.2.1))
23. Manual pull station. At least one (1) manual pull station is required on the interior of a building at the main entrance or in a location as approved by the fire code official. (LBMC § 18.48.490 (CFC § 903.4.2.2))
24. Manual fire alarm boxes shall be located within 5 ft. of each exit doorway on each floor. (NFPA 72 § 17.15.9.4)

25. Specify pathway class designations per NFPA 72 § 12.3.
26. All pathways shall comply with NFPA 70. (NFPA § 12.4)
27. Provide conduit fill calculations or NEC reference (CEC Article 760)
28. As a minimum, battery calculations shall apply a correction factor of 1.25 for aging to ensure the battery can meet its current demand at the end of service life. (NFPA 72 § 10.6.7.2.14)
29. Failure of a battery charger shall result in a trouble signal in accordance with NFPA 72 § 10.15. (NFPA 72 § 10.6)

To request this information in an alternative format or to request a reasonable accommodation, please contact the Community Development Department at [longbeach.gov/lbcd](http://longbeach.gov/lbcd) and 562.570.3807. A minimum of three business days is requested to ensure availability; attempts will be made to accommodate requests with shorter notice.