



# COALINGA FIRE DEPARTMENT

GREG DUPUIS, FIRE CHIEF

300 W. Elm Ave • Coalinga, CA 93210 • Phone (559) 935-1652 • Fax (559) 935-1638

## CITY OF COALINGA FIRE DEPARTMENT

### FIRE PREVENTION STANDARD

STANDARD TITLE: 401.012 FIRE ALARM SPECIFICATIONS

STANDARD NUMBER: 401.012

EFFECTIVE DATE: 1 October 2022

REVISION DATE: 1 October 2022

### PURPOSE

The purpose of this policy is to clarify the Coalinga Fire Department's (CFD or Department) requirements related to the preparation and submission of all non- electronic fire alarm system (and similar) plans.

### APPLICATION

This policy applies to all applicants submitting non-electronic fire alarm system (and similar) plans to CFD for review and approval for projects within the City of Coalinga.

### OPERATIONAL POLICY

Based upon the need for uniformity in application across the Department's diverse service delivery area, and after careful deliberation, the Department has determined the following:

1. Fire alarm systems are to be drawn with care by a trained person meeting all the requirements found within the applicable law, code, ordinance, or standard.
2. Plans will be drawn on a minimum of twenty-four-inch by thirty-six-inch (24" x 36") paper and shall be drawn to an indicated scale of not less than one-eighth inch (1/8") = one foot (1').
3. All notes and information on each plan sheet must be a minimum of twelve-point (12pt.) font or larger. Fonts must be either: Engineers font, Architects font, Arial font or Calibri font. Plans using unusual or difficult to read fonts will not be accepted. The Fire Marshal, or designee, will make the determination of acceptability, and the determination will be final.
4. An area of no less than four-inch by six-inch (4" x 6") located in the bottom right hand corner of each plan sheet (excluding the title block), must be left free of any text, mark, etc., to facilitate the marking of plans by Department staff.
5. Drawings are required to generally be organized based upon the United States Department of Energy, Fundamentals Handbook for Engineering Symbolology, Prints, and Drawings (Vols. 1 & 2) (1993 edition). Available for download at:

[http://edtech2.boisestate.edu/jasonclemens/512/files/DOE-v1\\_.pdf](http://edtech2.boisestate.edu/jasonclemens/512/files/DOE-v1_.pdf)

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6. Drawing line weights, match lines (where used) and legibility (including printed pages) must be in accordance with either the United States Department of Energy, Fundamentals Handbook for Engineering Symbology, Prints, and Drawings (Vols. 1 & 2) (1993 edition), or the latest edition of the American Institute of Architects design guidelines.
7. All fire protection symbols must be in accordance with National Fire Protection Association (NFPA) 170 Standard for Fire Safety and Emergency Symbols (2018 ed.) where a symbol is provided.
8. Each of the following items will be included on the fire alarm system plan submittal booklet (these items will be verified at the counter). Plans will be rejected when not present:
  - a. A detailed scope of work for the project including a description sufficient to clearly indicate the location, nature and extent of the work. A scope of work indicating "installation of a fire alarm system", or similar non-descript scoping is inadequate, and plans will be rejected without review.
  - b. Name of owner, occupant, or contracted construction firm.
  - c. Location of the project, including the City of Coalinga officially assigned address, and the City of Coalinga building permit number.
  - d. Name of the installing contractor, address, phone number, type of license and license number, with wet stamp and signature on each plan sheet.
  - e. The California Building Code (CBC) occupancy group and whether the building is sprinklered or not.
  - f. Equipment legend. Equipment legends will be prepared in the format shown on the sample legend at the end of this policy.
  - g. Installations must conform to NFPA 72 §26.6.4.1.4, and the exception to that section not permitted. When using radio transmission signals, the designer must note whether the transmitter used is for use as a single transmission path or as a secondary path (drawing must reflect the applicable installation).



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- h. In addition to all the information noted in this document, the plans and submittal booklet will also contain all documentation required as noted in NFPA 72 §7.2, 7.3 and 7.4. As noted in the referenced standard, this information constitutes the minimum amount of information required to be submitted to the authority having jurisdiction.
9. Each of the following items must be included on the fire alarm system plan sheets (these items will be verified at the counter). Plans will be rejected when not present:
- A site plan of the location on the drawing. A site plan must show the layout of the building relative to public streets and private drives. A location pin from mapping software does not meet the requirements of a site plan.
  - The CBC occupancy group and construction type of the proposed building.
  - The room use, square footage measurements, room dimensions, finished ceiling heights and occupant loads (in assembly areas) within each space.
  - If delayed egress is being requested.
- Note:** Additional notes, etc., are required for delayed egress submittals.
- Fire alarm sequence of operation matrix. Matrices must be prepared in the format shown on the sample matrix at the end of this policy.
  - Equipment legend. Equipment legends must be prepared in the format shown at the end of this policy.
  - HVAC systems that flow a cumulative two thousand (2,000) cfm of supply air must be interconnected to the fire alarm system and have automatic shut off. Each HVAC unit must shut off when any unit detects smoke (global shutoff). Plans and sequence of operation matrix must include HVAC supervision in accordance with the California Mechanical Code.
  - See: OSFM bulletin 08-065 at:

[https://osfm.fire.ca.gov/media/8014/08\\_065.pdf](https://osfm.fire.ca.gov/media/8014/08_065.pdf)



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- ii. See: Fire Prevention Policy, Section 407.004, HVAC Shut Off.
  
- h. Voltage drop calculations must use a starting voltage of 20.4V.
- i. If using an exception found in NFPA 72 or the CFC, it is the designer/contractor's responsibility to provide adequate and necessary documentation to use the exceptions per CFC §105. Alternate detector spacing, etc., must be noted in a sufficient manner. The Fire Marshal, or designee, will make the determination of acceptability, and the determination is final.
  
- j. Complete fire alarm riser diagram.
  
- k. All information required as noted in NFPA 72 §7.2.1(1) through 7.2.1(16).
  
- l. All plans must include the design sound pressure levels to be produced as noted in NFPA 72 §18.4.1.4.4/5. This information must be shown on the plans.
  
- m. All building fire alarms installed in buildings deemed as critical infrastructure by the Fire Marshal, or designee must have Class A or Class X wiring installed for each circuit as noted in NFPA 72.
  
- n. Resubmittals:
  - i. Revisions or changes must be called out with a cloud or delta. Each resubmittal is required to have a new numbered delta, and previous clouds or deltas must be removed. Submittals, addendums, revisions, etc., without proper clouding, an associated delta, or other substantial clarifying notes regarding the scope of work will be rejected without review. Changes made on plans between versions, etc., that are not identified with a cloud or delta are not approved. Addendum plans must be in accordance with Fire Prevention Policy, Section 401.016, Fire Related Construction Addenda.

#### 10. Standard Notes:

- a. It is the contractor's responsibility to make work available for inspection.
  
- b. A copy of the approved plan set shall be on site during any fire department inspection.
  
- c. Contractor required to provide decibel meter during final acceptance testing to field

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verify audible characteristics. No final will be given by the Department unless required audibility is field verified.

- d. Installation will comply with California Electrical Code, Section 300.21, regarding penetrations through fire resistive assemblies to prevent the spread of fire and toxic products of combustion.
- e. All other extinguishing systems (i.e., commercial cooking, clean agent, etc.) will be/or are interconnected to the fire alarm control panel as required, including on the sequence of operation.
- f. Exterior components shall be mounted in a weather tight manner.
- g. The wiring pathway designations and survivability level shall be shown in accordance with NFPA 72.
- h. Fire Alarm Record of Completion to be provided to the Department at final.
- i. A complete copy of the approved plan set shall be on site during any fire department inspection.
- j. Alarm bell shall not be on a silence-able zone.
- k. All existing equipment. Existing equipment is to be noted with an (E) on all submittal documents, if applicable.
- l. Dwelling units and sleeping units visible alarm notification appliances per CFC §907.5.2.3.2 Group R-1 and R-2.1, if applicable.
- m. All dwelling units and sleeping units shall be provided with capability to support visible alarm notification appliances CFC §907.5.2.3.3, Group R-2, if applicable.
- n. Designer has verified all new fire alarm equipment to be installed is backward compatible with existing fire alarm equipment, if applicable.
- o. "Shall not be used as a licensed daycare.", if applicable.
- P. "No napping permitted.", if applicable.
- Q. All applicable code references must be provided (i.e., 2016 NFPA 72 w/California Amendments, etc.)



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R. "No delayed egress or access control allowed with this permit".

#### **OPERATIONAL GUIDELINE**

This section intentionally left blank.

#### **PROCESS**

This section intentionally left blank.

#### **INFORMATION**

As noted in the *California Fire Code (CFC)*, Section 104, General Authority and Responsibilities, the fire code official has the authority to formulate policies they deem necessary based upon local conditions related to plan submittals for all systems and applications.

The requirements in this policy apply to both required and voluntary systems.

#### **DEFINITIONS**

This section intentionally left blank.

#### **CROSS REFERENCES**

*California Building Code*

*California Fire Code*

Section 104, General Authority and Responsibilities

*California Mechanical Code*

*California Electrical Code*

*Sample Equipment Legend*

*Sample Matrix*



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## Fire Alarm Sample Operations Matrix

NEW DEVICE QUANTITY	SYMBOL	DESCRIPTION	MODEL	MANUFACT.	CSFM II	ELECT. REQO
MAIN ELECTRICAL EQUIPEMENT						
00	IEACPI	FIRE ALARM CONTROL PANEL				
00	INACM	REMOTE POWER SUPPLY				
00	IEATCI	FIRE ALARM TERMINAL CAN				
00	IEAA 1	FIRE ALARM ANNUNCIATOR				
INITIATING DEVICES						
						-
00	@,	HEAT DETECTOR				
00	0	MANUAL PULL STATION				
00	-	PHOTOELECTRIC DUCT SMOKE DETECTOR				
INDICATING DEVICES						
02		15 CANDELA - WALL MOUNT HORN/STROBE				
00	@ii	30CANDELA - WALL MOUNT HORN/STROBE				
02		7 CANDELA - WALL MOUNT HORN/STROBE				
00	[E],J	95 CANDELA - WALL MOUNT HORN/STROBE				
00	!Z!,J	110CANDELA - CEILING MOUNT HORN/STROBE				
00		115CANDELA - CEILING MOUNT HORN/STROBE				
00		15 CANDELA - WALL MOUNT STROBE				
00		30 CANDELA - WALL MOUNT STROBE				
02	;	15 CANDELA - CEILING MOUNT STROBE				
00	;	30 CANDELA - CEILING MOUNT STROBE				
00	;	75 CANDELA - CEILING MOUNT STROBE				
MONITORING, CONTROL & RELAY MODULES						
00	<Al?;	WATERFLOW SWITCH/TAMPER SWITCH MONITORING INTERFACE DEVICE				
00	<8Z	WATERFLOW SWITCH/TAMPER SWITCH MONITORING INTERFACE DEVICE				
00	(A*),	WATERFLOW SWITCH/TAMPER SWITCH MONITORING INTERFACE DEVICE				
00		M-SUL SYSTEM MONITORING INTERFACE DEVICE				
00		AC & FIRE SMOKE DAMPER CIRCUIT RELAY MODULE				
00		DOOR HOLDER INTERFACE RELAY MODULE				
00		ELEVATOR CONTROL RELAY MODULES				
00		SHUTT/TRIP CIRCUIT CONTACTS				
REFERENCE DEVICES						
00	iIB	MAGNETIC WALL MOUNT ODOR HOLDER				
00	!AHLII	AIR HANDLER UNIT				
00	.,	FIRE SMOKE DAMPER				
00		WATERFLOW SWITCH				