FIRE ALARM SYMBOL LIST

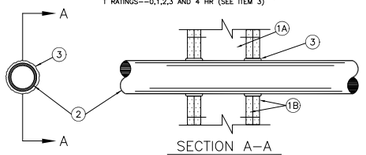
SYMBOL	DESCRIPTION	CSFM
FAMP	FIRE ALARM REMOTE PANEL SIEMENS MXL PSR-1 (EXISTING)	7300-0067:152
NAC	NAC POWER EXTENDER WHEELOCK PS-12/24-8MP (EXISTING)	7315-0785:162
FAA	FIRE ALARM ANNUNCIATOR SIEMENS RCC-1 (EXISTING, RELOCATED)	7300-0067:152
F	MANUAL FIRE ALARM PULL STATION SIEMENS MSI-10B	7150-0067:036
S	SMOKE DETECTOR SIEMENS FP-11	7272-0067:203
S	DUCT SMOKE DETECTOR SIEMENS AD2-XHR	3240-0067:245
#	FIRE ALARM HORN/STROBE - # DENOTES CANDELA WHEELOCK ZNS-MCW	7125-0785:142
#	FIRE ALARM STROBE - # DENOTES CANDELA WHEELOCK ZRS-MCW	7125-0785:142
	FIRE ALARM HORN WHEELOCK ZNH-24	7125-0785:142
EOL	END OF LINE RESISTOR	

FIRE ALARM SYSTEM NOTES

1. THE FIRE ALARM SYSTEM IS AN AUTOMATIC ADDRESSABLE, POWER-LIMITED FIRE ALARM SYSTEM. MANUAL PULL STATIONS ARE PROVIDED AT ALL EXITS. SMOKE DETECTORS ARE PROVIDED FOR THE HVAC SYSTEM AND TO PROTECT THE FIRE ALARM CONTROL UNITS.
2. CLASS B, STYLE 4 SLC SYSTEM.
3. NOTIFICATION APPLIANCE CIRCUITS ARE CLASS B, STYLE Y.
4. MINIMUM CONDUIT SIZE TO BE 3/4" FOR FIRE ALARM SYSTEM.
5. 10% MAXIMUM VOLTAGE DROP AND 80% MAXIMUM CURRENT ALLOWED FOR NOTIFICATION APPLIANCE CIRCUITS.
6. LISTING NUMBERS FOR EACH COMPONENT HAVE BEEN APPROVED BY DSA. UPON COMPLETION OF THE INSTALLATION, A TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF THE DSA INSPECTOR OF RECORD.
7. UPON COMPLETION OF SYSTEM INSTALLATION, THE SYSTEM SHALL BE TESTED IN THE PRESENCE OF AND IN A MANNER ACCEPTABLE TO DSA/PROJECT INSPECTOR. THE CONTRACTOR MUST SUPPLY NECESSARY TESTING EQUIPMENT INCLUDING A "SOUND LEVEL METER" TO CHECK ACCEPTABLE DECIBEL LEVELS OF AUDIBLE DEVICES. PROVIDE TEST RESULTS PER THE NFPA 72 "RECORD OF COMPLETION" TO ARCHITECT, DSA, PROJECT INSPECTOR, OWNER, AND TO THE LOCAL FIRE AUTHORITY.
8. THE "END OF LINE RESISTANCE" FOR EACH CIRCUIT SHALL BE TESTED IN THE PRESENCE OF THE PROJECT INSPECTOR AND SHALL NOT EXCEED A MAXIMUM OF 10% OF THE 24 VOLT SYSTEM. EACH COMPONENT IN THE CIRCUIT SHALL NOT EXCEED THE LISTED MANUFACTURER'S MINIMUM OPERATING VOLTAGES. SEE NFPA 72, LOOP RESISTANCE. THIS SECTION REQUIRES THAT ALL INITIATING AND INDICATING (NOTIFICATION APPLIANCE) CIRCUITS TO BE MEASURED AND RECORDED.
9. PENETRATIONS OF ALL FIRE-RESISTIVE WALLS SHALL BE PROTECTED IN ACCORDANCE WITH THE CALIFORNIA BUIDING CODE.
10. ALARM INDICATING DEVICES OF A FIRE ALARM SYSTEM INTENDED TO ALERT ALL OCCUPANTS SHALL CAUSE A LEVEL OF AUDIBILTY OF NOT LESS THAN 15 dBA ABOVE THE AVERAGE AMBIENT NOISE LEVELS OR 5 dBA ABOVE THE MAXIMUM SOUND LEVEL HAVING A DURATION OF 60 SECONDS WHICH-EVER IS GREATER. MEASURED 5' ABOVE THE FLOOR. AMBIENT NOISE LEVELS MEANS THE LEVEL THAT CAN BE NORMALLY EXPECTED WHEN THE FACILITY, BUILDING, ROOM, OR AREA IS FUNCTIONING UNDER NORMAL OPERATING OR WORKING CONDITIONS (NFPA 72, SEC. 7.4.2).
11. THE ALARM SYSTEM SHALL ACTIVATE A MEANS OF WARNING TO ALERT THE HEARING IMPAIRED. FLASHING VISUAL WARNINGS SHALL HAVE A FLASH RATE NOT EXCEEDING 2 FLASHES PER SECOND (2 HZ) NOR BE LESS THAN ONE FLASH PER SECOND (1 HZ). STROBE SIGNALING DEVICES FOR THE HEARING IMPAIRED SHALL BE STATE FIRE MARSHAL APPROVED AND LISTED (NFPA 72, SEC. 7.5.2). STROBES SHALL BE SYNCHRONIZED.

THROUGH-PENETRATION FIRESTOP SYSTEMS (XHEZ)

SYSTEMS NO. CP25WB+ CAULK ONLY
(FORMERLY SYSTEM NO. 147A)
F RATINGS--1,2,3 AND 4 HR (SEE ITEMS 2 AND 3)
T RATINGS--0,1,2,3 AND 4 HR (SEE ITEM 3)



SECTION A-A

1. Wall assembly - the 1,2,3 or 4 hr. fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 series wall or partition designs in the U.L. Fire Resistance Directory and shall include the following construction features:
   A. Studs-Wall framing may consist of either wood studs (max 2 hr fire rated assemblies) or steel channel studs. Wood studs to consist of nominal 2 by 4 in. lumber spaced 16 in. OC with nominal 2 by 4 in. lumber end plates and cross braces. Steel studs to be minimum 3-5/8 in. wide by 1-3/8 in. deep channels spaced max. 24 in. O.C.
   B. Wallboard, Gypsum* -nom 1/2 or 5/8 in thick, 4 ft. wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the U.L. Fire Resistance Directory. Maximum diameter of opening is 13-1/2 in.
2. Pipe or Conduit-Nom 12 in. dia. (or smaller) Schedule 10 (or heavier) steel pipe, nom. 6 in. dia. (or smaller) steel conduit, nom. 4 in. dia. (or smaller) steel Electrical Metallic Tubing or Type L (or heavier) copper tubing or nom 1 in. dia. (or smaller) flexible steel conduit. When copper pipe or flexible steel conduit is used, max F Rating of firestop system (item 3) is 2 hr. Steel pipes or conduits larger than nom 4 in. dia. may only be used in walls constructed using steel channel studs. A max of one pipe or conduit is permitted in the firestop system. Pipe or conduit to be installed near center of stud cavity width and to be rigidly supported on both sides of wall assembly.
3. Fill, Void or Cavity Material* - CP25WB+ Caulk - Caulk fill material installed to completely fill annular space between pipe or conduit and gypsum wallboard and with a min. 1/4 in. dia. bead of caulk applied to perimeter of pipe or conduit at its egress from the wall. Caulk installed symmetrically on both sides of wall assembly. The hourly F rating of the firestop system is dependent upon the hourly fire rating of wall assembly in which it is installed as shown in the following table. The hourly T rating of the fire stop system is dependent upon the type or size of the pipe or conduit and the hourly fire rating of the wall assembly in which it is installed, as tabulated below:

Max Pipe or Conduit Diameter, in.	Annular Space, in.	Rating Hour	Rating, Hour
1	0 to 3/16	1 or 2	0+, 1 or 2
1	1/4 to 1/2	3 or 4	3 or 4
4	0 to 1/4	1 or 2	0
6	1/4 to 1/2	3 or 4	0
12	3/16 to 3/8	1 or 2	0

+When copper pipe is used, T Rating is 0 hour.

* Bearing the UL Classification Marking.

INSTALLATION NOTES:

1. THE FIRE ALARM SYSTEM SHALL CONFORM TO THE ADOPTED EDITIONS OF THE CALIFORNIA ELECTRICAL CODE ARTICLE 760, CALIFORNIA CODE OF REGULATIONS TITLES 19 AND 24, AS APPLICABLE TO THIS PROJECT, AND NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) STANDARD 72.
2. INSTALLATION OF THE SYSTEM SHALL NOT BE STARTED UNTIL DETAILED PLANS AND SPECIFICATIONS, INCLUDING CALIFORNIA STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM HAVE BEEN APPROVED BY DSA.
3. A MINIMUM OF 48 HOURS NOTICE SHALL BE REQUIRED FOR ANY INSPECTION AND/OR TESTING.
4. A STAMPED SET OF APPROVED FIRE ALARM PLANS SHALL BE ON THE JOB SITE AND USED FOR INSTALLATION. ANY DEVIATION FROM APPROVED PLANS, INCLUDING THE SUBSITUTION OF DEVICES, SHALL BE APPROVED BY DSA.
5. DISCREPANCIES BETWEEN THE DRAWINGS AND THE CODE OR RECOGNIZED STANDARDS SHALL BE BROUGHT TO THE ATTENTION OF THE INSPECTOR OF RECORD.
6. A CERTIFICATE OF COMPLIANCE SHALL BE PREPARED BY THE INSTALLER AND GIVEN TO THE INSPECTOR UPON COMPLETION OF THE INSTALLATION.
7. ALL FIRE ALARM CIRCUITS ARE CONTINUOUS FROM DEVICE TO DEVICE. SPLICES ARE NOT ALLOWED UNLESS IN COVERED JUNCTION BOXES ON APPROVED TERMINAL BLOCKS. WHEN SPLICING TSP, IT IS NECESSARY THAT ALL SUCH CONNECTIONS BE SOLDERED (RESIN-CORE SOLDER), CRIMPED IN METAL SLEEVES, ENCAPSULATED WITH AN EPOXY RESIN OR JOINED BY WIRE NUTS. WHEN SOLDER OR CRIMPED METAL SLEEVES ARE USED, THE JUNCTION MUST BE INSULATED WITH A HIGH GRADE ELECTRICAL TAPE AS SOUND AS THE ORIGINAL INSULATING JACKET. CONTINUITY OF THE SHIELD MUST BE MAINTAINED.
8. NUMBER ADJACENT TO ADDRESSABLE DEVICES INDICATES SLC# AND ADDRESS. NUMBER ADJACENT TO NOTIFICATION APPLIANCES INDICATES CIRCUIT NUMBER AND DEVICE SEQUENCE, E.G., NA1-7 IS THE 7TH DEVICE ON CIRCUIT A1.
9. THE FIRE ALARM SIGNALS SHALL BE DISTINCTIVE IN SOUND FROM ANY OTHER SIGNALS AND THAT THIS SOUND NOT BE USED FOR ANY OTHER PURPOSE. TO MEET THIS REQUIREMENT, THE FIRE ALARM SIGNAL USED TO NOTIFY BUILDING OCCUPANTS OF THE NEED TO EVACUATE (LEAVE THE BUILDING) SHALL MATCH EXISTING SOUND & PATTERN.
10. AREA SMOKE DETECTORS SHALL NOT BE LOCATED CLOSER THAN 3'-0" FROM:
    (a.) THE DOOR TO A KITCHEN OR A BATHROOM CONTAINING A TUB OR SHOWER.
    (b.) SUPPLY REGISTERS OF A FORCED AIR HEATING OR COOLING SYSTEM.
11. ALL EXTERIOR AND UNDERGROUND CONDUIT SHALL BE WATERTIGHT.
12. ALL WIRING SHALL BE IN CONDUIT.

SCOPE OF WORK

PROVIDE EXPANSION OF AN EXISTING ADDRESSABLE FIRE ALARM SYSTEM.

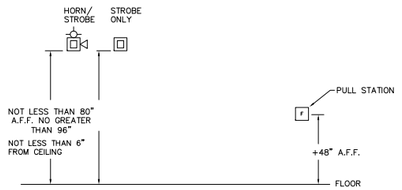
WALL TYPE

— — — — INDICATES FIRE RATED WALL.

FIRE ALARM SYSTEM OPERATIONAL MATRIX

CAUSE	EFFECT: ALARM AT FACP	ALARM TO CENTRAL STATION	ACTIVATE AUDIBLES	ACTIVATE VISUALS	FAN SHUT DOWN (NOTE 1)	TROUBLE AT FACP	TROUBLE TO CENTRAL STATION	SUPERVISORY AT FACP	SUPERVISORY TO CENTRAL STATION	RESET FACP AND FIELD DEVICES	DEACTIVATE AUDIBLES	DEACTIVATE VISUALS
	ALARM					TROUBLE		SUPERVISORY			MISC.	
SPOT TYPE SMOKE DETECTOR	●	●	●	●								
DUCT SMOKE DETECTOR					●			●	●			
MANUAL PULL STATION	●	●	●	●								
SYSTEM SILENCE											●	●
SYSTEM RESET										●		
POWER FAILURE						●	●					
FIRE ALARM TROUBLE (OPEN, OR GROUNDS) ON INITIATION OR SIGNAL CIRCUITS						●	●					

NOTES: 1. SHUT DOWN BY ASSOCIATED DETECTORS ONLY.



1 MOUNTING HEIGHT REQUIREMENTS

NO SCALE

FIRE ALARM MONITORING NOTE

AUTOMATIC FIRE ALARM SYSTEM SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION AS REQUIRED BY NFPA 72 AS AMENDED BY ARTICLE 91. THE SUPERVISING STATION SHALL BE LISTED AS EITHER UUFX OR UUJS BY UNDERWRITERS LABORATORY OR SHALL MEET THE REQUIREMENTS OF FACTORY MUTUAL RESEARCH APPROVAL STANDARD 3011. SUPERVISION OF SYSTEM AND LEASED TELEPHONE LINES SHALL BE ARRANGED BY OWNER.

FIRE ALARM ADDRESS LEGEND

XXX-###
- XXX-### — DEVICE ADDRESS
- WHERE: XXX = LOOP NUMBER
- ### = DEVICE ADDRESS

WIRE SCHEDULE

A	1 PAIR #16 TWISTED AND SHIELDED
B	1 PAIR #14

NOTE: LETTER DESIGNATION INDICATES CABLE TYPE. NUMBER OF HASH MARKS INDICATES QUANTITY OF CABLES. E.G., —╫—, INDICATES TWO, #18 TSP CABLES. (A)

DRAWING INDEX

BC|A
architecture
planning
interiors

Bunton Clifford Associates, Inc.
210 Hammond Ave.
Fremont, California 94539
[T] 510.445.1000
[F] 510.445.1005
www.BCAincOnline.com

ARCHITECT

LICENSED ARCHITECT PAUL CURTIS BUNTON No. C018659 Ren.: 9/30/09 STATE OF CALIFORNIA

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REVISION HISTORY

REMARKS	DATE

DRAWING STATUS

	DATE
DSA PLAN CHECK	02/27/08
DSA BACK CHECK	06/04/08
BIDDING	06/26/08
CONSTRUCTION	

FILE NO. 41-C1

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
01- 109554
AC.____ FLS.____ SS.____
DATE_____

BUILDING 8 PHASE 2 RENOVATION PROJECT

San Mateo County Community College District

CAÑADA COLLEGE

4200 Farm Hill Boulevard
Redwood City, CA 94061

FIRE ALARM SYMBOL LIST, NOTES, MATRIX & DRAWING INDEX

Date: 06/12/08
Scale: AS NOTED
Project Number: 07014
Drawing Number: FA0.1