AGENCY TRACKING NO. 63321-356

IDENTIFICATION STAMP

OFFICE OF REGULATION SERVICES

03-120240

DIV. OF THE STATE ARCHITECT

FILE NO. 15-6

AGENCY INFORMATION:



PRIME CONSULTANT

B

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BAKERSFIELD CITY SCHOOL DISTRICT



BESSIE OWENS E.S. KINDERGARTEN

V.Z.

D.F.

10/29/2019

**MODULAR BUILDINGS** 815 POTOMAC AVE, BAKERSFIELD, CA 93307 OPSC or OSHPD PROJ. NO: PROJECT NO: 118932

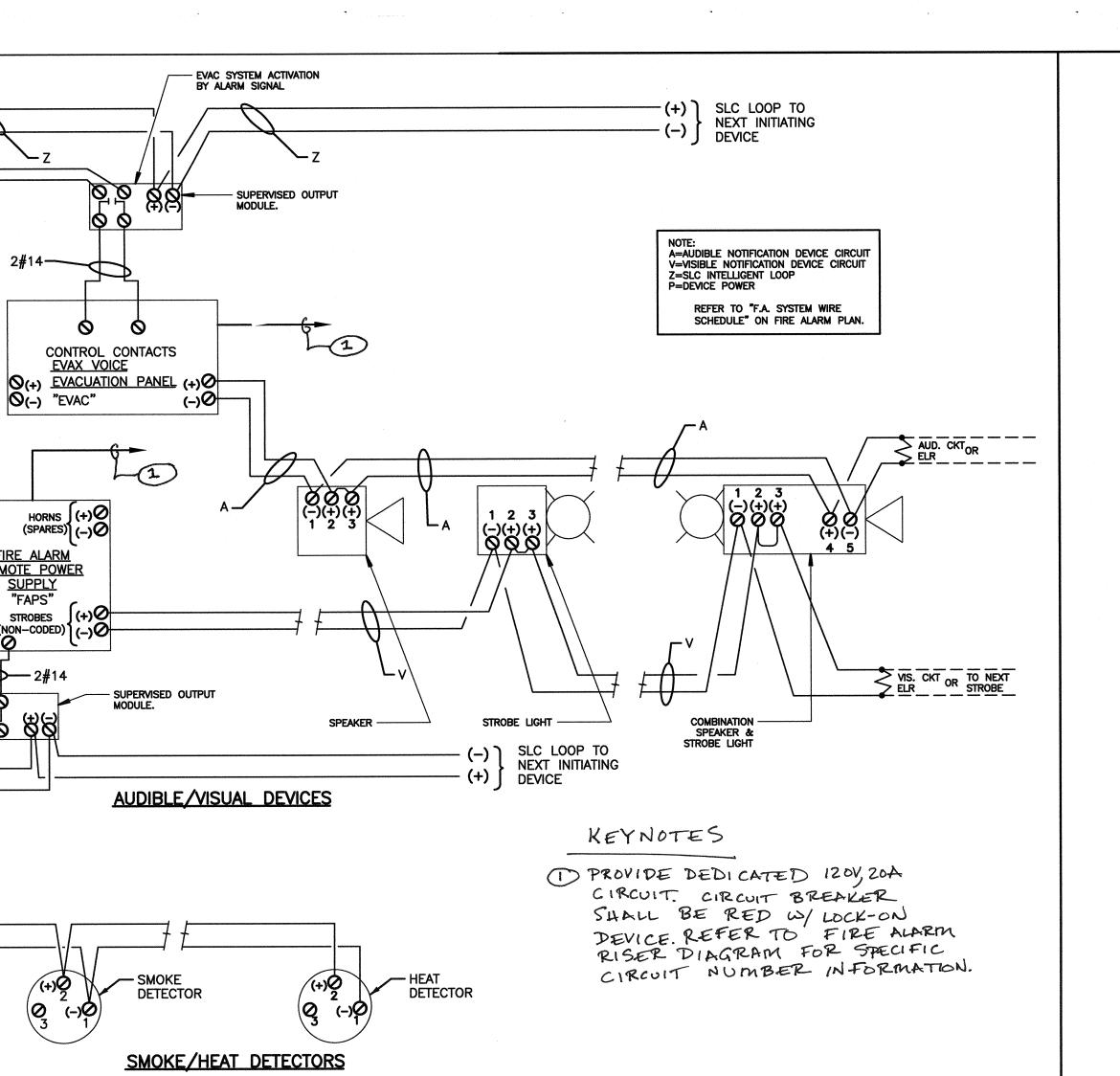
DRAWN BY: CHK'D BY: SHEET TITLE

FIRE ALARM EQUIPMENT LIST, FIRE ALARM **NOTES, FIRE ALARM DETAILS, WIRING** 

**DIAGRAMS** 

SHEET NUMBER

E300



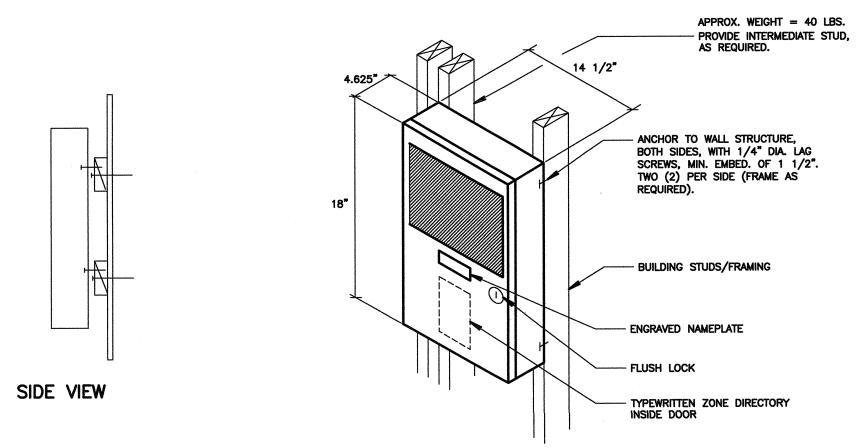
\* — TEMPERATURE SETTING OF HEAT DETECTOR DEVICE TO BE SET AT MINIMUM OF 20°F, ABOVE THE MAXIMUM EXPECTED TEMPERATURE OF THE SPACE INSTALLED PER NFPA 72, 2—23.

TYPICAL DEVICES WIRING DIAGRAMS DETAIL SPEAKER/STROBE OR SPEAKER (SPEAKER ONLY DEVICE +90" AFF TO TOP OR 6' BELOW FINISHED CEILING. - JUNCTION BOX MOUNTED ON STRUCTURAL CEILING. WHICHEVER IS LOWER) +80" TO BOTTOM OF LENS (MIN.) 96" TO TOP OF LENS (MAX) ABOVE FINISHED FLOOR OR 6" BELOW FINISHED \* HEAT DETECTOR IN ABOVE CEILING OR ATTIC SPACE. CEILING, WHICHEVER IS LOWER \*\* MANUAL PULL STATION A.F.F. TO HIGHEST POINT OF ACTIVATING HANDLE OR LEVER FINISHED FLOOR \*\* NOTE: PER ADAAG, 2002 - 4.27.4 & CBC 117B.5(4), 114B.2.4, 907.3.2

> TYPICAL FIRE ALARM DEVICE MOUNTING DETAILS SCALE: NOT TO SCALE

CONTROLS AND OPERATING MECHANISMS AT

INITIATING DEVICE "SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO



MIN. CLEAR 30"×48"

MIN. CLEAR 30"x48" FRONT APPROACH

SLC LOOP TO NEXT INITIATING

SLC LOOP TO NEXT INITIATING DEVICE

SLC LOOP
TO FACP OR (+)
PREVIOUS

INITIATING DEVICE

EVAX VOICE

(-) "EVAC"

FIRE ALARM REMOTE POWER

SUPPLY "FAPS"

(NON-CODED) (-)

3 MOUNTING DETAIL

NOT TO SCALE

FIRE ALARM REMOTE POWER SUPPLY (FAPS),

## **GENERAL NOTES** . SMOKE DETECTORS SHALL BE INSTALLED 3' AWAY FROM SUPPLY AND RETURN AIR GRILLES. FIRE ALARM EQUIPMENT SPECIFICATIONS SCHEDULE 2. FINAL FIRE ALARM TEST OF ALL DEVICES SHALL BE WITNESSED BY THE PROJECT INSPECTOR. TEST SHALL INCLUDE ALL INFORMATION PER NFPA 72, FIGURE 14.6.2.4 AND READ OUT VERIFICATION FORM FROM CENTRAL STATION. TEST SHALL ALSO BE WITNESSED BY THE LOCAL AUTHORITY MOUNTING HEIGHT BACKBOX REMARKS SYMBOL MODEL. NO DESCRIPTION MANUFACTURER | CSFM. LISTING # REQUIREMENTS (TO CENTER U.O.N.) HAVING JURISDICTION (A.H.J.). 3. UNDERGROUND AND EXTERIOR CONDUITS WILL HAVE WATER-TIGHT FITTINGS (C.E.C. 110.11 AND 300.6). DVC-EM 4. AUDIBLE DEVICE(S) SHALL BE AT LEAST 15dbA ABOVE AVERAGE AMBIENT SOUND LEVEL BUT NOT LESS THAN 75dbA AT 10' OR MORE THAN 110 **EQUIPMENT** DVC-KD EXISTING FIRE ALARM CONTROL NOTIFIER 7165-0028:0224 dba in total, <u>Throughouti</u> (NFPA 72 18.4.1 AND C.F.C. 907.6.2). +60" FACP CABINET CMIC-1 5. AUDIBLE DEVICES SHALL SOUND THE CALIFORNIA CODE IN TEMPORAL PATTERN, CODE 3. DAA2-7525 ACPS-610 6. VISUAL DEVICES SHALL NOT EXCEED TWO FLASHES PER SECOND AND SBB-D4R SHALL NOT BE SLOWER THAN ONE FLASH PER SECOND. (NFPA 72 DR-D4R **EQUIPMENT** RE ALARM REMOTE POWER ACPS-610 NOTIFIER 7315-0028:0248 7. PROVIDE AN ENGRAVED NAMEPLATE INDICATING THE D.S.A. APPLICATION NUMBER, FILE NUMBER AND DATE OF INSTALLATION AT FIRE ALARM POWER EXPANDER PANEL. WHITE LETTERS ON A RED BACKGROUND. DPM CAB-PS1 CABINET ADDRESSABLE SMOKE DETECTOR 8. PROVIDE A COPY OF THE BATTERY CALCULATION AT THE FIRE ALARM POWER EXPANDER PANEL. BATTERY CALCULATION SHALL CONTAIN INFORMATION AS NOTED ON SCHEDULES AND BE PLASTIC LAMINATED. **NOTIFIER** OUTLET BOX WITH S.G FSP-951 MOUNT ONTO INSIDE FACE OF DOOR. " SQ. X. 2 1/8" DP. ADDRESSABLE HEAT DETECTOR NOTIFIER 7270-0028:050 OUTLET BOX WITH S.G. FST-951H 9. MORE THAN TWO VISIBLE NOTIFICATION APPLIANCES OR GROUPS OF SYNCHRONIZED APPLIANCES IN THE SAME ROOM OR ADJACENT SPACE W/BASE, #B300-6 RAISED RING WITHIN THE FIELD OF VIEW SHALL FLASH IN SYNCHRONIZATION (NFPA 72 10. THE AUTOMATIC ALARM SYSTEM SHALL BE INSTALLED, TESTED AND 11. THE FIRE ALARM SYSTEM SHALL CONFORM TO ARTICLE 760 OF THE CALIFORNIA ELECTRICAL CODE, CURRENT CALIFORNIA TITLE 24 REQUIREMENTS, CALIFORNIA FIRE CODE, NFPA 72 AND 101 STANDARDS, AMERICAN WITH DISABILITY ACT (ADA) REQUIREMENTS. IWBB(A) OUTDOOR SPRK(A) DUTDOOR WALL MOUNT SPEAKER 7320-1653:0201 **SENSOR** 12. DRAWINGS DO NOT SHOW ALL THE NECESSARY J-BOXES AND PULL BOXES WHICH WILL BE REQUIRED THROUGHOUT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL THESE BOXES AS NECESSARY TO TERMINATE CONDUITS AND RACEWAYS. PAINT BOXES TO MATCH COLOR OF THE FINISHED BUILDING WALLS. WALL MOUNTED COMBINATION 4" SQ. X 2 1/8" DP. 7320-1653:0505 SPEAKER & STROBE LIGHT (CANDELA OUTLET BOX SENSOR VALUE AS SHOWN ON PLANS) 13. ALL JUNCTIONS BOXES AND DEVICES INDICATED ON BUILDING EXTERIORS SHALL BE WEATHERPROOF TYPE. 14. FIRE ALARM WIRES SHALL BE COPPER TYPE THWN/THHN. 15. ALL SIGNAL WIRING IN UNDERGROUND CONDUITS SHALL BE WET LOCATION TYPE. " SQ. X 2 1/8" DP. END OF LINE RESISTOR 1 OUTLET BOX 16. WHEN ALL FIRE ALARM DEVICES ARE INSTALLED AND PROGRAMMING IS COMPLETE, PROVIDE A FIRE ALARM DEVICE MAP IN THE SCHOOL MAIN OFFICE TO INDICATE TO SCHOOL PERSONNEL THE LOCATIONS OF THE NEW DEVICES. 4" SQ. X. 2 1/8" DP. OUTLET BOX 17. JUNCTION BOXES SHALL NOT CONTAIN SPLICES. CONDUCTORS SHALL BE PULLED THROUGH. TERMINATIONS SHALL BE PERFORMED.

ΓAG	CONDUCTORS	DEVICE/FUNCTION	INTERIOR INSTALLATION	EXTERIOR INSTALLATION  MIN. 1" CONDUIT			
٧	2#12, THWN/THHN	VISIBLE NOTIFICATION DEVICES—STROBE LIGHTS	MIN. 3/4" CONDUIT				
Z	1-PAIR #16 TWISTED, SHIELDED PAIR WEST PENN AQC294 (BLDG. EXTERIOR & UNDERGROUND)  1-PAIR #16 TWISTED, WEST PENN D990 (BLDG. INTERIOR)	CAMPUS/BLDG. SLC INTELLIGENT LOOP INITIATING DEVICES (PULL STATIONS, SMOKE AND HEAT DETECTORS, WATER FLOW AND TAMPER SWITCHES, MONITOR AND CONTROL MODULES, ETC.)	MIN. 3/4" CONDUIT	MIN. 1" CONDUIT			
A	1-PAIR #16 TWISTED SHIELDED PAIR, WEST PENN AQC294 (BLDG. EXTERIOR & UNDERGROUND) 1-PAIR #16 TWISTED SHIELDED PAIR, WEST PENN 991. (BLDG. INTERIOR).	AUDIBLE NOTIFICATION DEVICES—SPEAKERS	MIN. 3/4" CONDUIT	MIN. 1" CONDUIT			

NOTIFIER

SYSTEM

SENSOR

7165-0028:0224

7315-0028-0248

7320-1653:0505

**EQBB-C4 (BLACKBOX** 

EQDR-C4 (DOOR)

4" SQ. X. 2 1/8" DP.

VISIBLE CIRCUIT -/ NO. 1

INTELLIGENT LOOP NO. -

OUTLET BOX

					SEQU	ENC	E OF	OPE	RATIC	ONS									
		ANNUNCIATE/DISPLAY AT FACP (ALARM, TROUBLE OR SUPERVISORY)	SOUND FACP TROUBLE BUZZER (ALARM, TROUBLE OR SUPERVISORY)	ANNUNCIATE AT REMOTE FIRE ALARM ANNUNCIATOR (ALARM, TROUBLE OR SUPERVISORY)	ACTIVATE RELAY FOR CENTRAL STATION MONITORING. (ALARM, TROUBLE OR SUPERVISORY)	ACTIVATE AUDIBLE/VISUAL ALARM SIGNAL THROUGHOUT BUILDING.								SYSTEM WILL BE 100% OPERATIONAL (UP TO 24 HOURS) ON BATTERY BACKUP					SHUT DOWN AIR HANDLER UNITS
		А	В	С	D	Е	F	G	Н	ı	J	К	L	М	N	0	Р	Q	R
1	MANUAL PULL STATIONS	•	•	•	•	•													
2	SMOKE DETECTORS	•	•	•	•	•													•
3	FIRE ALARM SYSTEM AC POWER FAIL	•	•	•	•									•					
4	FIRE ALARM SYSTEM LOW BATTERY	•	•	•	•														
5	OPEN CIRCUIT	•	•	•	•														
6	GROUND FAULT	•	•	•	•														
8	HEAT DETECTORS	•	•	•	•	•													
9	NOTIFICATION CIRCUIT SHORT	•	•	•	•														
10																			

R50

ACPS-610

18. ALL EXPOSED CONDUITS AND BOXES SHALL BE PAINTED TO MATCH THE

EQUIPMENT SPECIFICATIONS

(NOTE: THESE NOTES MAY NOT APPEAR ON ALL SHEETS)

APPLIANCE CIRCUITS FEEDING FROM FIRE ALARM POWER EXPANDER PANELS.

NOTES (FIRE ALARM

END OF LINE RESISTORS SHALL BE 10K FOR NOTIFICATION APPLIANCE CIRCUITS FEEDING FORM FIRE ALARM CONTROL PANEL AND 2.2K FOR NOTIFICATION

SET FOR 194 DEGREES.

THIS EQUIPMENT IS EXISTING FIRE ALARM RISER DIAGRAM.

4 PROVIDE TRIM RING, #TRC-2

SCHEDULE)

SURFACE WHERE INSTALLED.

**AUDIBILITY** 

ALARM INDICATING DEVICES OF A FIRE ALARM SYSTEM INTENDED TO ALERT ALL OCCUPANTS SHALL BE SO LOCATED AND UNOBSTRUCTED AS TO CAUSE A LEVEL OF AUDIBILITY OF NOT LESS THAN 15db ABOVE AMBIENT NOISE LEVELS MEASURED FOUR FEET ABOVE THE FLOOR INSIDE BUILDING. AMBIENT NOISE LEVELS SHALL BE CONSTRUED TO MEAN THAT WHICH CAN NORMALLY BE EXPECTED TO EXIST WHEN THE FACILITY, BUILDING, ROOM OR AREA IS FUNCTIONING UNDER NORMAL OPERATIVE OR WORKING CONDITIONS. THE FIRE ALARM SIGNAL SHALL COMPLY WITH THE CALIFORNIA EDUCATION CODE, SECTIONS 32000 AND 32004, AND BE A TEMPORAL PATTERN, CODE 3.

ALL DRAWINGS ARE DIAGRAMMATIC ONLY, AND SHALL NOT BE USED IN DETERMINING ACTUAL CONDUIT ROUTING. THE CONTRACTOR SHALL VERIFY ALL CONDUIT ROUTING CONDITIONS AT THE PROJECT SITE AS CONSTRUCTION

END AND AT THE SIGNAL TERMINAL CABINET AND/OR FIRE ALARM MASTER PANEL TERMINATION POINT.

FIRE ALARM MONITORING

FIRE ALARM LEGEND

F.A. SYSTEM WIRING, TAG IDENTIFIES THE FOLLOWING: FIRST NUMBER INDICATES QUANTITY OF LOOPS OR CIRCUITS; LETTER NOTATION INDICATES TYPE OF LOOP OR CIRCUIT, INCLUDING CONDUCTOR

REQUIREMENTS, PER "F.A. SYSTEM WIRE SCHEDULE" ON THIS SHEET; NUMBER AFTER LETTER INDICATES LOOP NUMBER.

DENOTES F.A. DEVICE CONNECTED TO NOTIFICATION CIRCUITS, OR INTELLIGENT LOOP CIRCUITS AND CONSECUTIVE DEVICE I.D. NO. FOR THIS LOOP.

AUTOMATIC FIRE ALARM SYSTEMS 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 OF SHALL MEET THE REQUIREMENTS OF FACTORY MUTUAL RESEARCH APPROVAL STANDARD 3011. SUPERVISION OF SYSTEM AND LEASED TELEPHONE LINES SHALL BE ARRANGED BY OWNER.

COMPLETE AUTOMATIC FIRE ALARM PLAN SUBMITTAL

THE FIRE ALARM SYSTEM SHOWN ON THESE PLANS HAS BEEN SUBMITTED AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT. ANY SUBSTITUTION OF THE FIRE ALARM SYSTEM SHALL BE RESUBMITTED TO THE ARCHITECT FOR REVIEW AND APPROVAL. THE CONTRACTOR SHALL PAY ANY ADDITIONAL FEES THAT ARE INCURRED DUE TO THIS SUBSTITUTION. THE FIRE ALARM SYSTEM SHALL BE A TOTAL (COMPLETE) AUTOMATIC HEAT AND SMOK DETECTION SYSTEM, PER C.F.C SECTION 907.2.3.6, AND SHALL COVER EVERY ROOM AND/OR AREA. UPON THE ACTIVATION OF ANY INITIATION DEVICE THE FIRE ALARM SYSTEM SHALL ALERT ALL OCCUPANTS AND TRANSMIT THE ALARM, SUPERVISORY, AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION (C.F.C. SECTION 907.2.3.5).

SCHOOLS FIRE ALARM REQUIREMENTS

THE FIRE ALARM SYSTEM SHALL CONFORM TO CALIFORNIA BUILDING CODE, SECTION 907.2.3; CALIFORNIA ELECTRICAL CODE, ARTICLE 760 AND CALIFORNIA FIRE CODE, CHAPTER 9, SECTION 907. UPON COMPLETION OF THE INSTALLATION OF THE FIRE PROTECTIVE SIGNALING EQUIPMENT, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF THE AUTHORITY HAVING JURISDICTION, NFPA 72. IF TESTING RESULTS DETERMINE FIRE ALARM AUDIBILITY DOES NOT MEET 15db OVER AMBIENT NOISE LEVELS, ADDITIONAL FIRE ALARM SIGNALING DEVICES MAY BE REQUIRED BY THE AUTHORITY HAVING JURISDICTION. FIRE ALARM SYSTEM CERTIFICATION AND DESCRIPTION SHALL BE PROVIDED FOR TESTING AND A PLASTIC LAMINATED COPY SHALL REMAIN (WITH INSTRUCTIONS) AT THE FIRE ALARM CONTROL PANEL PER NFPA 72. THE FIRE ALARM "RECORD OF COMPLETION" FORM, FIGURE 10, 18, 2, 1 IN NFPA 72, SHALL BE COMPLETED, SIGNED AND SUBMITTED TO THE SCHOOL DISTRICT AND THE

LOCAL AUTHORITY (K.C.F.D.) HAVING JURISDICTION AT THE COMPLETION OF THE TEST.

FIRE ALARM REMOTE AMPLIFIER &

POWER SUPPLY (50W AMPLIFIER)

CEILING MOUNTED COMBINATION

VALVE AS SHOWN ON PLANS)

SPEAKER & STROBE LIGHT(CANDELA)

CODE, RULES & REGULATIONS ALL WORK AND MATERIALS SHALL COMPLY WITH THE LATEST REGULATIONS OF THE STATE FIRE MARSHAL, CALIFORNIA CODE OF REGULATIONS, SERVING UTILITY COMPANIES AND OTHER APPLICABLE STATE ORDINANCES. NOTHING IN THESE PLANS OR SPECIFICATIONS IS TO BE CONSTRUED AS TO PERMIT WORK NOT CONFORMING TO THESE CODES. WHERE WORK OF A HIGHER DEGREE IS INDICATED IN THE PLANS OR SPECIFICATIONS THIS REQUIREMENT SHALL GOVERN.

FIRE ALARM LEVEL OF

FIRE ALARM SYSTEM **INSTALLATION NOTES** 

ALL FIRE ALARM DATA COMMUNICATIONS AND INITIATING CIRCUITS SHALL BE INSTALLED UTILIZING SOLID COPPER CONDUCTORS WITH OUTER COVERING COLORS PER THE SPECIFICATIONS AND AS SHOWN ON THE DRAWINGS. ALL SMOKE DAMPER AND REMOTE TROUBLE INDICATOR CIRCUITS SHALL BE YELLOW. ALL CIRCUITS SHALL BE INDIVIDUALLY LABELED, BOTH AT THE DEVICE FIND AND AT THE SIGNAL TERMINAL CARDINET AND ADD AT THE SIGNAL TERMINAL CARDINET AND ADD AT THE SIGNAL TERMINAL CARDINET.

ALL FIRE ALARM CIRCUITS SHALL BE CONTINUOUS FROM DEVICE TO DEVICE. SPLICES ARE NOT ALLOWED UNLESS IN COVERED JUNCTION BOXES ON APPROVED TERMINAL BLOCKS. 'T' TAPPING IS ALLOWED ONLY UNDER THESE CONDITIONS.