APPLICABLE CODES

- 2001 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE
- 2001 CALIFORNIA BUILDING CODE, VOLUMES 1, 2 AND 3
- 2001 CALIFORNIA ELECTRICAL CODE
- 2001 CALIFORNIA MECHANICAL
- 2001 CALIFORNIA PLUMBING CODE
- 2001 CALIFORNIA ENERGY CODE
- 2001 CALIFORNIA ELEVATOR SAFETY CONSTRUCTION CODE
- 2001 CALIFORNIA FIRE CODE
- 2001 CALIFORNIA REFERENCED STANDARDS CODE
- TITLE 19 PUBLIC SAFETY – CALIFORNIA STATE FIRE MARSHAL REQUIREMENTS
- NFPA 13, 1999 EDITION, THE INSTALLATION OF AUTOMATIC SPRINKLER SYSTEMS, AS AMENDED
- NFPA 14, 2000 EDITION, INSTALLATION OF STANDPIPE, PRIVATE HYDRANT AND HOSE SYSTEMS
- NFPA 24, 1995 EDITION, INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES
- NFPA 72, 1999 EDITION, NATIONAL FIRE ALARM CODE, AS AMENDED
- GREEN OAKS FAMILY ACADEMY ELEMENTARY SCHOOL FIRE PROTECTION ACT (aka SB575)

FIRE ALARM SYSTEM DESCRIPTION

1. FIRE ALARM SYSTEM AND DEVICES ARE "ANALOG ADDRESSABLE" TYPE.
2. FIRE ALARM SYSTEM INITIATION METHOD IS "AUTOMATIC" TYPE.
3. LOCAL FIRE AUTHORITY SHALL RECEIVE A COPY OF APPROVED PLANS FOR COURTESY REVIEW.
4. FIRE ALARM SYSTEM SIGNALING CIRCUITS ARE "CLASS B" TYPE.
5. SUPERVISING STATION MONITORED AS REQUIRED BY NFPA 72, AMENDED BY ARTICLE 91.

FIRE DETECTION SYSTEM NOTES:

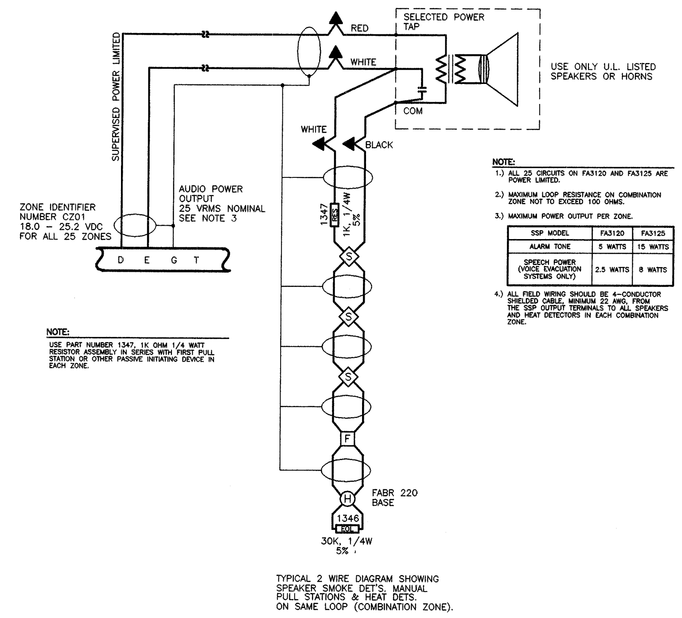
1. ALL WIRING IS SHOWN DIAGRAMMATICALLY. CONTRACTOR MAY VARY SEQUENCE OR CIRCUITRY: HOWEVER, ALL CIRCUITS SHALL BE CONTINUOUS AND SUPERVISED FROM DEVICE TO DEVICE OR FAT TO DEVICE OR FCP TO FAT OR FAT TO FAT. NO PARALLEL BRANCHING SHALL BE ALLOWED. ANY CONNECTION OF ANY BREAK IN ANY CONDUCTOR SHALL BE BY TERMINAL CONNECTION AT A DEVICE OR AT A FAT ONLY.
2. ALL CONNECTIONS SHALL BE PROPERLY LABELED BY CONDUCTOR AND SHALL HAVE STAKE ON LUG CONNECTORS. PANDUIT TAG (TIE WRAP) SEPARATE.
3. FIRE ALARM TERMINAL CABINETS SHALL HAVE SUFFICIENT SPACE, TERMINAL BOARDS AND SCREW TERMINAL CONNECTORS TO ALLOW CONNECTION OF ALL CONDUCTORS SHOWN. CONTRACTOR SHALL BE REQUIRED TO SUBMIT WITH HIS OTHER SHOP DRAWINGS, DETAILED DRAWINGS OF HIS PROPOSED CONNECTIONS AT EACH FIRE ALARM TERMINAL CABINET PRIOR TO COMMENCING ANY WORK.
4. ALL CONDUCTORS SHOWN SHALL BE #12 & #14 AWG, STRANDED (19 STRANDS OR LESS) COPPER, UNLESS OTHERWISE NOTED. (THHN/THWN – BELOW GRADE).
5. WRITTEN CERTIFICATION USING NFPA 72 INSPECTION AND TESTING FORM BY THE FIRE ALARM EQUIPMENT DISTRIBUTOR (OR VENDOR OR MANUFACTURER) SHALL BE SUBMITTED TO THE ARCHITECT (WITH COPIES TO THE ELECTRICAL ENGINEER AND THE STATE ARCHITECT) AND THE INSTALLATION INCLUDES TESTING AND OPERATION CONFORMS IN ALL RESPECTS TO THE REQUIREMENTS AS SET FORTH IN TITLE 19 OF THE CALIFORNIA CODE OF REGULATIONS AND PART 3, ARTICLE 3–760 OF TITLE 24 OF THE C.C.R. AND C.B.C. SECTION 305.9 . THE CONTRACTOR SHALL COMPLETE A FIRE ALARM SYSTEM CERTIFICATION AND DESCRIPTION FORM AND SUBMIT TO DIVISION OF STATE ARCHITECT.
6. UPON COMPLETION OF THE INSTALLATION OF THE FIRE ALARM SYSTEM, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF THE ENFORCING AGENCY AND INSPECTOR OF RECORD.
7. NEW FIRE ALARM AUDIBLES SHALL BE THE SAME BASIC SOUND & PATTERN AS EXISTING. PROVIDE TEMPORAL CODE 3. ALL AUDIBLES AND VISUALS SHALL BE SYNCHRONIZED.
8. ALL UNDERGROUND CONDUITS AND EXTERIOR CONDUCTORS SHALL HAVE WATER TIGHT FITTING.
9. SMOKE DETECTORS SHALL BE MOUNTED MINIMUM 36" FROM SUPPLY AND RETURN AIR VENTS PER MANUFACTURER'S RECOMMENDATIONS.
10. INSTALLATION OF F.A. EQUIPMENT SHALL BE BY AN AUTHORIZED ENGINEERED SYSTEM DISTRIBUTOR FOR THE EQUIPMENT SPECIFIED BY THE MANUFACTURER FOR SALES, SERVICE, INSTALLATION AND MAINTENANCE. PROVIDE CERTIFICATIONS WITH EQUIPMENT SUBMITTALS. SUBMITTALS BY FIRMS NOT FULFILLING THIS REQUIREMENT WILL BE AUTOMATICALLY REJECTED.
11. THE CERTIFIED INSTALLER WILL BE REQUIRED TO PROVIDE ALL FACTORY WARRANTIES AT THE CLOSE UP OF THE PROJECT.
12. INSTALLER SHALL BE NICET LEVEL 2 CERTIFIED.
13. THE CONTRACTOR SHALL ARRANGE A MEETING WITH F.A. INSTALLER PRIOR TO ROUGH–IN TO COORDINATE THE INSTALLATION.
14. PROVIDE ACCESS HOLE FOR ALL ATTIC HEAT DETECTORS LOCATED IN NON–ACCESSABLE CRAWL OR ATTIC SPACES.
15. CONTRACTOR SHALL PROVIDE SOUND LEVEL METER FOR VERIFYING THAT 15d BA ABOVE AMBIENT NOISE AND MINIMUM 75d BA AT 10 FEET IS PROVIDED BY INSTALLED (E)AUDIBLE DEVICES. ADDITIONAL AUDIBLE NOTIFICATION DEVICES SHOULD BE ADDED AS NEEDED TO SATISFY THIS REQUIREMENT VIA CHANGE ORDER OR ADDENDUM WITH UPDATE FLOOR PLANS AND CALCULATIONS

NOTE:

1. PROVIDE FIRE ALARM ANNUNCIATOR AND ZONE MAP. NEW ANNUNCIATOR SHALL BE LOCATED ADJACENT TO ZONE MAP WHERE APPLICABLE.
2. PROVIDE #12 COPPER GROUNDING CONDUCTOR TO GROUND ROD, METAL WATER PIPE OR SEPARATE CONDUCTOR IN 120V FEED FOR ALL NEW FACP.

SCOPE OF WORK

THIS PROJECT IS A MODERNIZATION OF A EXISTING SCHOOL CAMPUS. THE FIRE ALARM PORTION OF THIS PROJECT SHALL INCLUDE ADDITION OF AUTOMATIC DETECTION DEVICES TO A EXISTING FIRE ALARM SYSTEM, TO INCLUDE DETECTION/INITIATION DEVICES, AND NOTIFICATION APPLIANCES, AS INDICATED ON THESE PLANS. ALL REQUIRED MODULES, CARDS, RESISTORS, MISCELLANEOUS PARTS, ETC. SHALL BE PROVIDED, WHETHER SHOWN OR NOT, TO PROVIDE A COMPLETE SYSTEM.



NOTE:
1.) ALL 25 CIRCUITS ON FA3120 AND FA3125 ARE POWER LIMITED.
2.) MAXIMUM LOOP RESISTANCE ON COMBINATION ZONE NOT TO EXCEED 100 OHMS.
3.) MAXIMUM POWER OUTPUT PER ZONE.

SSP MODEL	FA3120	FA3125
ALARM TONE	5 WATTS	15 WATTS
SPEECH POWER (VOICE EVACUATION SYSTEMS ONLY)	2.5 WATTS	8 WATTS

4.) ALL FIELD WIRING SHOULD BE 4–CONDUCTOR SHIELDED CABLE, MINIMUM 22 AWG, FROM VSM SSP OUTPUT TERMINALS TO ALL SPEAKERS AND HEAT DETECTORS IN EACH COMBINATION ZONE.

NOTE:
USE PART NUMBER 1347, 1K OHM 1/4 WATT RESISTOR ASSEMBLY IN SERIES WITH FIRST PULL STATION OR OTHER PASSIVE INITIATING DEVICE IN EACH ZONE.

TYPICAL 2 WIRE DIAGRAM SHOWING SPEAKER SMOKE DET'S, MANUAL PULL STATIONS & HEAT DETS. ON SAME LOOP (COMBINATION ZONE).

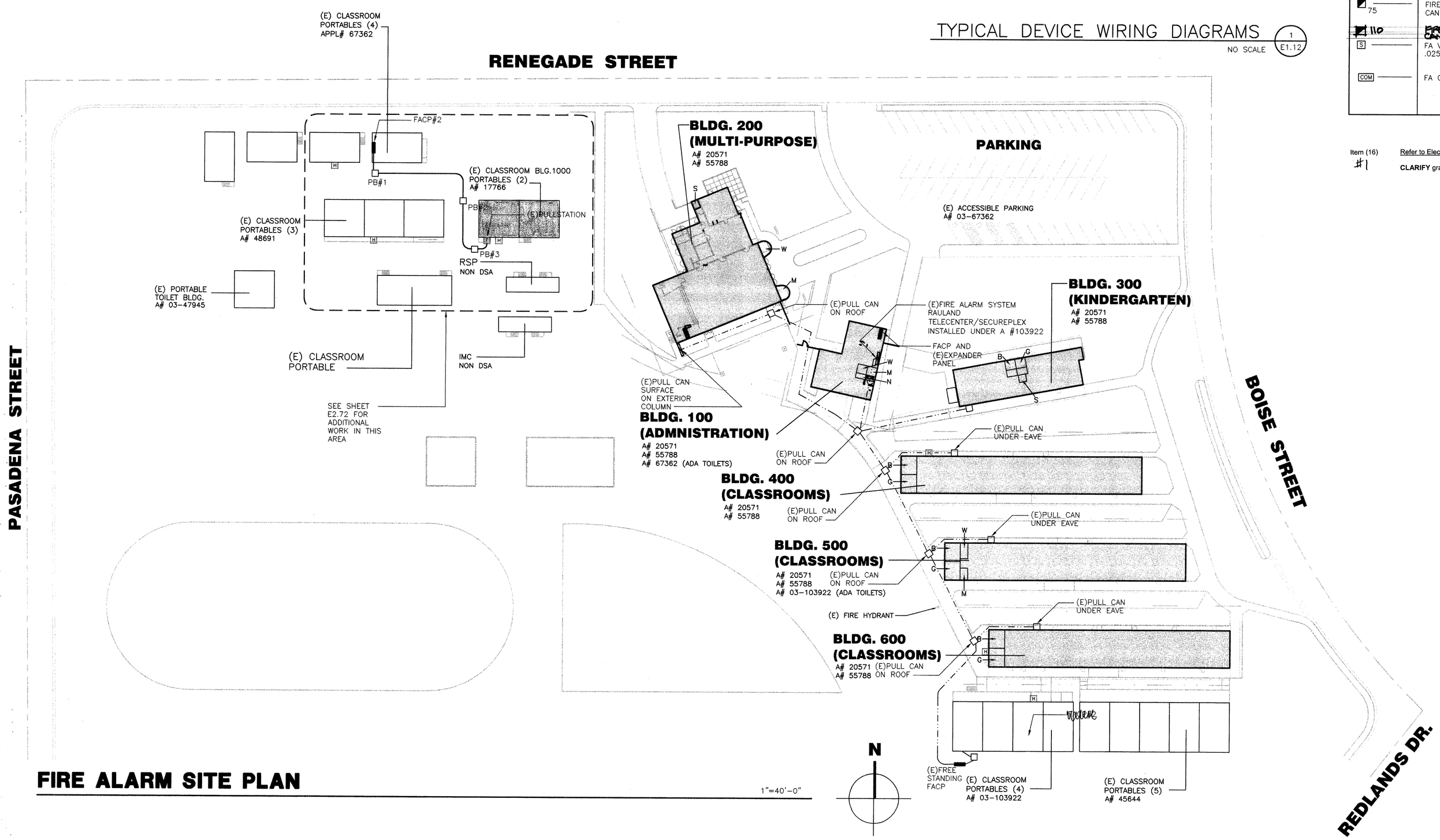
TYPICAL DEVICE WIRING DIAGRAMS

NO SCALE (1 / E1.12)

SYMBOL SCHEDULE

SYMBOL	NAME	DESCRIPTION
	WIRING UNDER FLOOR OR IN WALL	3/4"C. MINIMUM U.O.N.
	WIRING IN CEILING	3/4"C. MINIMUM U.O.N.
	HOME RUN	TO RESPECTIVE PANEL OR TERM. CAB.
	SURFACE TWO PIECE RACEWAY	WIREMOLD # PAINT TO MATCH ADJACENT SURFACE
	END OF THE LINE RESISTOR	
S	INTERCOM SPEAKER .65 OPERATING WATTS	RAULAND #US0221 CSFM #7320–0082:100 W/ ATLAS/SOUNDOLIER 12" RD. BAFFLE, COLOR TO MATCH ROOM INTERIOR
F	(E)FIRE ALARM PULL STATION	FCI #MS–2 CSFM #7150–0694:107
H	(E)INTERCOM HORN (OUTDOOR) 7.75 OPERATING WATTS	ATLAS/SOUNDOLIER #APF–15TUC W/ VANDAL–PROOF ENCLOSURE & BAFFLE CSFM #7320–1173:101
H A	HEAT DETECTOR IN ATTIC CONVENTIONAL	RAULAND #FA302 CSFM #7270–0082:110
H	HEAT DETECTOR CEILING MOUNTED CONVENTIONAL	RAULAND #FA302 CSFM #7270–0082:110
S	SMOKE DETECTOR 3MAX PER ZONE	RAULAND #FA202 CSFM #7271–0082:106 SUPERVISORY 40 uA ALARM CURRENT 150mA W/BASE RAULAND #FA200 CSFM #7300–0082:105 ALARM CURRENT 51mA
J	JUNCTION BOX – AS REQUIRED	4S BOX & FLUSH PLATE MINIMUM
J W	JUNCTION BOX – 'W' INDICATES WIREMOLD	
15	FIRE ALARM VISUAL. '#' INDICATES CANDELA. SYNCRONIZED	WHEELOCK #RSS–2415W–FR OPERATING CURRENT .051A CSFM # 7125–0785:141
30	FIRE ALARM VISUAL. '#' INDICATES CANDELA. SYNCRONIZED	WHEELOCK #RSS–2430W–FR OPERATING CURRENT .081A CSFM # 7125–0785:141
75	FIRE ALARM VISUAL. '#' INDICATES CANDELA. SYNCRONIZED	WHEELOCK #RSS–2475W–FR OPERATING CURRENT .133A CSFM # 7125–0785:141
~~110~~	~~FIRE ALARM VISUAL '#' INDICATES CANDELA. SYNCRONIZED~~	~~WHEELOCK # RSS – 24110W – FR OPERATING CURRENT .161A CSFM # 7125–0785:141~~
S	FA VISUAL SYNCHRONIZATION MODULE .025 OPERATING AMPS	WHEELOCK #SM–12/24 CSFM #7300–0785:132
COM	FA COMMUNICATOR	SILENT KNIGHT #5104 CSFM #7165–0559:114

Item (16) Refer to Electrical Drawings, Sheet E1.12 – Electrical Site Plan:
#1 **CLARIFY** graphic symbol for "surface two-piece raceway" to be – W – W – W .



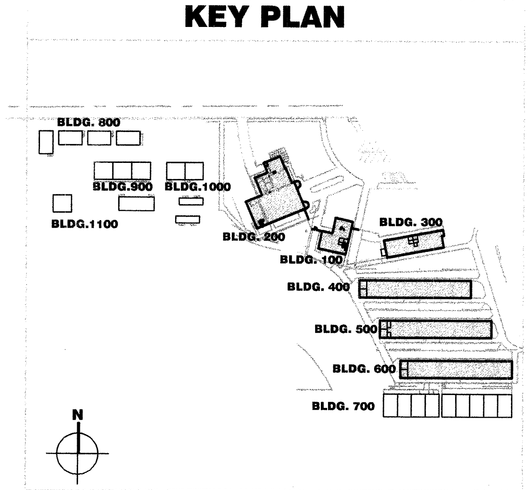
FIRE ALARM SITE PLAN

1"=40'–0"

FULLY AUTOMATIC SYSTEM

FIRE ALARM COMPLETE PLAN SUBMITTAL

KEY PLAN



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DATE AUG 26 2003

MODERNIZATION

FOR

COLONEL HOWARD NICHOLS SCHOOL
3401 RENEGADE AVE.
BAKERSFIELD, CA 93306

BAKERSFIELD CITY SCHOOL DISTRICT

FIRE ALARM SITE PLAN AND DETAILS

Version Date:	Version time:
job no.	02–127
date	06/24/03
drawn by	TATYANA
chk'd by	DAVOR
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E 1.12

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