



# GONSALVES & STRONCK

Construction Company Inc.

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## SUBMITTAL COVER

<b>Project Name:</b>	ESUHSD - Districtwide FA Modernization
<b>Address:</b>	830 North Capitol San Jose, CA 95133
<b>Owner:</b>	East Side Union High School District
<b>Address:</b>	830 N. Capitol Ave San Jose, CA 95133
<b>CIP Project #:</b>	1-XXX-810
<b>Architect / CM:</b>	
<b>Address:</b>	
<b>Arch. Project #:</b>	n/a
<b>DSA Project #:</b>	

<b>Submittal #</b>	012831-04
<b>Sequential #</b>	

	Date Sent	Date Required
<b>Subcontracto To G&amp;S:</b>	9/16/2016	<del>                    </del>
<b>Date to Arch / CM:</b>	9/19/2016	
<b>Arch / CM to Consultant:</b>		
<b>Consultant to Arch / CM:</b>		
<b>Arch / CM to G&amp;S:</b>		
<b>G&amp;S to Subcontractor:</b>		

**Subcontracto To G&S:**  
**Date to Arch / CM:**  
**Arch / CM to Consultant:**  
**Consultant to Arch / CM:**  
**Arch / CM to G&S:**  
**G&S to Subcontractor:**

**Specifications Section:** 012831

**Submittal Description:** Design Documents

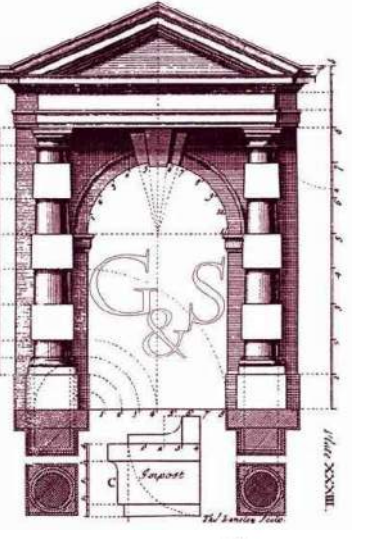
**Subcontractor,  
Fabricator or  
Supplier**  
  
**Akerman-Practicon**

*Item(s) Submitted*

- LEED
- PRODUCT DATA
- SHOP DRAWINGS
- CERTIFICATES
- MOCK-UP
- SAMPLES-COLOR
- TEST REPORTS
- QA / QC
- O&M
- AS-BUILT
- EXTRA STOCK
- WARRANTY
- INSPECTION
- TRAINING
- OTHER

95% DD FOOTHILL

<p>Gonsalves &amp; Stronck Construction has review the attached submittal and :</p> <p><input checked="" type="checkbox"/> <b>AS SPECIFIED</b> We have verified that the material or equipment contained in this submittal meets all the requirements specified or shown.</p> <p><input type="checkbox"/> <b>SUBSTITUTION</b> We have verified that the material or equipment contained in this submittal meets all the requirements specified or shown except for the following deviations</p> <p>(List Items):</p> <p><i>William Hutchinson</i>        Reviewed By: _____        Bill Hutchinson, Project Manager</p> <p><b>Detail dimension(s) not checked. Subcontractor is responsible for correctness of dimensions and fitting of parts.</b></p>	<p style="text-align: center;"><b>REVIEWER STAMP(S):</b></p>
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Revision:	Date:
95% DD	9/14/16

**FIRE ALARM MODERNIZATION**  
**FOOTHILL HIGH SCHOOL**  
**230 PALA AVE.**  
**SAN JOSE, CA 95127**

**OWNER:**  
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High School District  
830 North Capital Ave  
San Jose, CA 95133  
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**GENERAL CONTRACTOR:**  
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P: (510) 651-4994

Job No.:	16021
Drawn By:	AP
Date:	05-23-2016
Eng. Approval:	DAVID KUNG
PM Approval:	DAVID KUNG
Scale:	AS SHOWN

**FIRE ALARM**  
**GENERAL INFORMATION**

Sheet No.:

**FA0.0**

**SYMBOL LIST**

CEILING	WALL
	NAC REMOTE POWER SUPPLY
	FIRE ALARM CONTROL PANEL, LETTER ADJACENT INDICATES PANEL STYLE AS REFERENCED IN FIRE ALARM LEGEND
	FIRE ALARM TERMINAL CABINET
	LOCAL OPERATING CONSOLE "LOC" A PAGING COMPONENT THAT PROVIDES EMERGENCY NOTIFICATION AND CAN BE REMOTELY DISTRIBUTED IN REAL TIME VIA PRE-RECORDED MESSAGES, LIVE VOICE PAGING, OR TEXT MESSAGES. THE LOC SHALL COMPRISE THE FOLLOWING: 1) ONE INCC-MIC, PAGING MICROPHONE. 2) ONE ASM-16, ADDRESSABLE SWITCH MODULE. 3) ONE NGA, NETWORK GRAPHIC ANNUNCIATOR.
	OFF-SITE NOTIFICATION TRANSMITTER
	SMOKE DETECTOR
	HEAT DETECTOR
	ABOVE CEILING HEAT DETECTOR
	DUCT SMOKE DETECTOR
	MANUAL PULL STATION AT +42" MIN. TO 48" A.F.F. TO HIGHEST PART OF ACTIVATING HANDLE
	MONITOR MODULE
	SUPERVISORY SWITCH ON "OS&T" VALVE
	CEILING OR WALL FIRE ALARM STROBE. WALL MOUNTED TYPE SHALL BE MOUNTED WITH ENTIRE LENS MOUNTED AT NOT LESS THAN 80" AND NOT GREATER THAN 96" AFF.
	CEILING OR WALL FIRE ALARM SPEAKER. WALL MOUNTED TYPE SHALL BE MOUNTED AT NOT LESS THAN 96" TO TOP OF DEVICE.
	CEILING OR WALL FIRE ALARM SPEAKER/STROBE. WALL MOUNTED TYPE SHALL BE MOUNTED WITH ENTIRE LENS MOUNTED AT NOT LESS THAN 80" AND NOT GREATER THAN 90" AFF.
	FIRE ALARM STROBE - WEATHERPROOF, WITH ENTIRE LENS MOUNTED BETWEEN +80" TO 96" AFF
	FIRE ALARM SPEAKER - WEATHERPROOF AT NOT LESS THAN 90" AFF TO TOP OF DEVICE.
	RELAY MODULE RCE 95
	SIGNAL CONTROL RELAY
	END-OF-LINE DEVICE
	SHEET NOTE REFERENCE MARKER, NOTE #1 SHOWN.
	WIRES IN CONDUIT CONCEALED UNDERFLOOR OR UNDERGROUND.
	WIRES IN CONDUIT.

**ABBREVIATIONS**

<b>ARCH.</b>	ARCHITECT	<b>IDC</b>	INITIATING DEVICE CIRCUITS
<b>AWG</b>	AMERICAN WIRE GAUGE	<b>(N)</b>	NEW
<b>BKR</b>	BREAKER	<b>NAC</b>	NOTIFICATION APPLIANCE CIRCUITS
<b>BLD</b>	BUILDING	<b>NIC</b>	NOT IN CONTRACT
<b>CB</b>	CIRCUIT BREAKER	<b>NO</b>	NUMBER
<b>CKT</b>	CIRCUIT	<b>SLC</b>	SIGNALING LINE CIRCUITS
<b>CLG</b>	CEILING	<b>TYP</b>	TYPICAL
<b>(E)</b>	EXISTING	<b>UN</b>	UNLESS OTHERWISE NOTED
<b>FA</b>	FIRE ALARM	<b>WP</b>	WEATHERPROOF
<b>FACP</b>	FIRE ALARM CONTROL PANEL	<b>SWBD</b>	SWITCHBOARD
<b>IOR</b>	INSPECTOR OF RECORD		

**DRAWING INDEX**

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FA0.3	FIRE ALARM RISER DIAGRAM
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FA0.10	FIRE ALARM DETAILS
FA0.11	FIRE ALARM BUILDING SECTIONS
FA1.0	FIRE ALARM SITE PLAN
FA2.1	PARTIAL FIRE ALARM FLOOR PLANS - BLD. B, E & S
FA2.2	FIRE ALARM FLOOR PLANS - BLD. A & D
FA2.3	FIRE ALARM FLOOR PLANS - BLD. G, H1 & H2
FA2.4	FIRE ALARM FLOOR PLANS - BLD. A, B & FAMILY CTR.
FA2.5	FIRE ALARM FLOOR PLANS - BLD. I, J, K1 & K2

**PROJECT DESCRIPTION**

- OCCUPANCY TYPE: E (SCHOOL)
- SYSTEM TYPE: CLASS B, AUTOMATIC ADDRESSABLE SYSTEM.
- STYLE OF CIRCUITS:  
A. INITIATING CIRCUIT, SLC LOOP CLASS B/STYLE 4.  
B. NOTIFICATION APPLIANCE CIRCUITS, NAC CLASS B/STYLE Y.
- METHOD OF COMMUNICATION: RADIO TRANSMISSION.
- PROVIDE UL CENTRAL STATION MONITORING.

**SCOPE OF WORK**

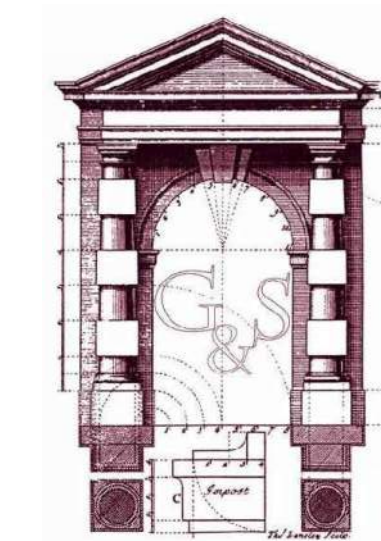
- REPLACE ALL EXISTING FIRE ALARM CONTROL PANELS IN VARIOUS BUILDINGS AS IDENTIFIED ON SITE PLAN WITH NEW GAMEWELL-FCI E3 SERIES CONTROL UNIT COMPONENTS AND EQUIPMENTS.
- CONNECT ALL EXISTING DEVICES AND APPLIANCES IN BUILDING NOT UNDERGOING DETECTION AND NOTIFICATION MODERNIZATIONS. PROVIDE POWER SUPPLIES, CONTROL UNITS AND OTHER EQUIPMENT AS NEEDED AND AS INDICATED ON CONTRACT DOCUMENTS TO ACCOMMODATE THESE CONNECTIONS.
- REPLACE THE EXISTING OFF-SITE NOTIFICATION TRANSMITTER SYSTEM WITH A NEW RADIO MESH TRANSMITTER SYSTEM TO BE MONITORED BY SCHOOL DISTRICT'S CENTRAL MONITORING STATION.
- PERFORM COMPLETE FIRE ALARM MODERNIZATIONS IN BUILDINGS AS SHOWN ON CONTRACT DOCUMENTS INCLUDING BUT NOT BE LIMITED TO:  
A. REPLACE OR INSTALL NEW GAMEWELL-FCI E3 SERIES EQUIPMENT AS SHOWN ON DRAWINGS.  
B. INSTALL ALL NEW INITIATING AND NOTIFICATION DEVICE THROUGHOUT, U.O.N.  
C. DOCUMENT AND TEST FIRE ALARM SYSTEM OPERATION AFTER COMPLETION OF INSTALLATION.

**FIRE ALARM LEGEND**

SYMBOL	QTY	MODEL NO.	DESCRIPTION	GSFM LISTING NO.
	1 EA.	GAMEWELL-FCI E3 SERIES	ADDRESSABLE FIRE ALARM CONTROL PANEL, LETTER ADJACENT INDICATES STYLE OF PANEL AS FOLLOWS: STYLE 'B' INCLUDES: IF600 RETROFIT, IL95-MB-E3, PM-9, 100-0450, RPT-E3-UTP, FML-E3(X2). STYLE 'G' INCLUDES: E3BB-RC/INX, E3-INX-C PLATE 90375, PM-9, 1100-1323, IL95-MB-E3, AM-50-70(X2), DACT-E3, RPT-E3-UPT(X2), FML-E3(X2), 90521. STYLE 'G1' INCLUDES: STYLE 'G' + IL1-S-E3 STYLE 'L' INCLUDES: E3BB-RD/INC, E3-INX-D PLATE, LCD-E3, IL-MB-E3, PM-9, 1100-0450(X3), 1100-0455, INI-VGX, AM-50-70(X2), DACT-E3, RPT-E3-UPT(X2), FML-E3(X2), 90521 STYLE 'F' INCLUDES: INX-CAB-C, E3BB-RC/INX, E3-INX-C PLATE, 90375, PM-9, 1100-1323, AM-50-70(X2), 90521, IL-MB-E3 STYLE 'F1' INCLUDES: STYLE 'F' + IL95-S-E3	7165-1703:0125
	1	GAMEWELL-FCI E3 SERIES LOC	LOCAL OPERATING CONSOLE INCLUDES: E3BB-BAA, E3I03-A, 1100-1321, 1100-0452, 1100-0455, 1100-04-S, 90492	7165-1703:0125
		GAMEWELL-FCI HFFF8	REMOTE NAC POWER SUPPLY	7135-1637:0102
		GAMEWELL-FCI ASD-PL2F	SMOKE DETECTOR, ADDRESSABLE, PHOTOELECTRONIC TYPE	7272-1703:0121
		GAMEWELL-FCI	ADDRESSABLE HEAT DETECTOR, LETTERS ADJACENT INDICATE ABOVE CEILING	7270-1703:0115
		GAMEWELL-FCI B2/EOLP	SMOKE/HEAT DETECTOR MOUNTING BASE	7272-1703:0121
		GAMEWELL-FCI ASD-PL2F-DNR	DUCT SMOKE DETECTOR + HOUSING	7272-1703:0121
		AES	RF SUBSCRIBER UNIT	7300-1516:0108
		GAMEWELL-FCI AOM-ZSF	ADDRESSABLE CONTROL MODULE	7300-1703:0102
			END OF LINE DEVICE	-
		GAMEWELL-FCI MS-7	ADDRESSABLE MANUAL PULL STATION	7150-1703:0119
		GAMEWELL-FCI SCW	CEILING MOUNTED MULTI-CANDELA STROBE, NUMBERS & LETTERS ADJACENT INDICATE CANDELA SETTING	7125-1653:0188
		GAMEWELL-FCI SR	WALL MOUNTED MULTI-CANDELA STROBE, NUMBERS & LETTERS ADJACENT INDICATE CANDELA SETTING	7125-1653:0188
	1/4w	GAMEWELL-FCI SPSCW	CEILING MOUNTED MULTI-CANDELA SPEAKER/STROBE DEVICE NUMBERS & LETTERS ADJACENT INDICATE CANDELA SETTING OF STROBE AND SPEAKER SOUND OUTPUT	7300-1653:201
	1/4w	GAMEWELL-FCI SPSR	SAME AS CEILING MOUNTED MULTI-CANDELA SPEAKER/STROBE DEVICE, EXCEPT WALL MOUNTED	7300-1653:201
	1/4w	GAMEWELL-FCI SPCW	CEILING MOUNTED FIRE ALARM SPEAKER, NUMBERS & LETTERS ADJACENT INDICATE SPEAKER SOUND OUTPUT	7300-1653:201
	1/4w	GAMEWELL-FCI SPR	WALL MOUNTED INDOOR FIRE ALARM SPEAKER, NUMBERS & LETTERS ADJACENT INDICATE SPEAKER SOUND OUTPUT	7300-1653:201
	1/2w	GAMEWELL-FCI SPRK	WALL MOUNTED INDOOR FIRE ALARM SPEAKER, NUMBERS & LETTERS ADJACENT INDICATE SPEAKER SOUND OUTPUT	7300-1653:201



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A-P PROJECT NUMBER: 16021



Revision:	Date:
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**FOOTHILL HIGH SCHOOL**  
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Sheet Title: **FIRE ALARM GENERAL INFORMATION**

Sheet No.: **FA0.1**

**GENERAL FIRE ALARM NOTES**

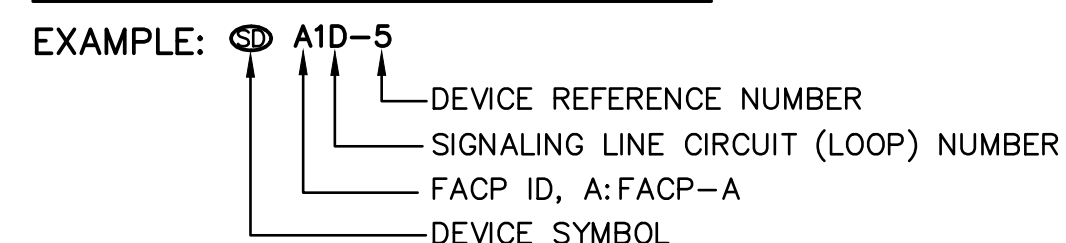
- THE INSTALLATION OF THE FIRE ALARM SYSTEM SHALL BE MADE IN COMPLIANCE WITH THE FOLLOWING CODES AND STANDARDS:
  - 2013 CALIFORNIA BUILDING CODE - PART 2, TITLE 24, CCR.
  - 2013 CALIFORNIA ELECTRICAL CODE - PART 3, TITLE 24, CCR.
  - 2013 CALIFORNIA MECHANICAL CODE - PART 4, TITLE 24, CCR.
  - 2013 CALIFORNIA PLUMBING CODE - PART 5, TITLE 24, CCR.
  - 2013 CALIFORNIA FIRE CODE - PART 2, TITLE 24, CCR.
  - TITLE 19, CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.
  - APPLICABLE STANDARD NFPA 72 NATIONAL FIRE ALARM CODE 2013 EDITION.
- INSTALLATION OF THE SYSTEMS SHALL NOT BE STARTED UNTIL DETAILED DESIGN DOCUMENTS AND SPECIFICATION, INCLUDING STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM HAS BEEN APPROVED BY DSA.
- UPON COMPLETION OF THE INSTALLATION OF THE SYSTEMS, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF A DSA PROJECT INSPECTOR.
- A STAMPED SET OF APPROVED FIRE ALARM DESIGN DOCUMENTS SHALL BE ON THE JOB SITE AND USED FOR INSTALLATION.
- ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE CODE OR RECOGNIZED STANDARDS SHALL BE BROUGHT TO THE ATTENTION OF DSA AND THE ARCHITECT/ENGINEER OF THE PROJECT.
- DSA, ARCHITECT/ENGINEER AND OWNER SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO THE FINAL INSPECTION AND/OR TESTING.
- ALL PENETRATIONS THROUGH RATED ASSEMBLIES, REQUIRING OPENING PROTECTION SHALL BE PROVIDED WITH A PENETRATION FIRE STOP SYSTEM AS IDENTIFIED IN CBC CHAPTER 7, U.L. OR OTHER LAB TESTING CRITERIA. APPROVED TYPE OF MATERIALS SHALL BE IDENTIFIED WITHIN THE SPECIFICATION WITHIN THE FIRE ALARM SECTION.
- WALL MOUNTED VISUAL NOTIFICATION DEVICES SHALL HAVE THEIR BOTTOMS MOUNTED AT 80" MINIMUM AND 96" MAXIMUM FROM FINISHED FLOOR.
- WALL MOUNTED AUDIBLE NOTIFICATION DEVICES SHALL HAVE THEIR TOPS MOUNTED AT 90" MINIMUM AND 100" MAXIMUM FROM FINISHED FLOOR AND NO CLOSER THEN 6" TO A HORIZONTAL STRUCTURE.
- AUDIBLE DEVICES SHALL PROVIDE A SOUND PRESSURE LEVEL OF 15 DECIBELS (Dba) ABOVE THE AVERAGE AMBIENT SOUND LEVEL OR 5 Dba ABOVE THE MAXIMUM SOUND LEVEL HAVING A DURATION OF AT LEAST 60 SECONDS, WHICHEVER IS GREATER, IN EVERY OCCUPIABLE SPACE WITHIN THE BUILDING.
- AUDIBLE DEVICES SHALL BE SYNCHRONIZED TEMPORAL CODE 3 PATTERN.
- THE CONTRACTOR SHALL ADJUST/INSTALL ALL DEVICES TO MAXIMIZE PERFORMANCE AND TO MINIMIZE FALSE ALARMS.
- VISUAL DEVICES SHOULD NOT EXCEED 2 FLASHES PER SECOND AND SHOULD NOT BE SLOWER THAN 1 FLASH EVERY SECOND. THE DEVICE SHALL HAVE A PULSING LIGHT SOURCE NOT LESS THAN 15 CANDELLA. VISUAL DEVICES WITHIN 55' FROM EACH OTHER SHALL BE SYNCHRONIZED.
- ALL FIRE ALARM WIRING SHALL BE FPLP (FIRE POWER LIMITED OR FIRE POWER LIMITED PLENUM) AS REQUIRED FOR APPLICATION. WIRING IN CONDUIT ABOVE GROUND MAY BE THHN OR THWN.
- PER CEC STANDARDS, ALL WIRING IS TO BE PULLED THROUGH EACH JUNCTION BOX AND CONNECTED DIRECTLY TO EACH FIRE DEVICE. DO NOT SPLICE THE WIRE. ALL BOXES TO BE SIZES PER CEC.
- SMOKE DETECTORS SHALL NOT BE ANY CLOSER THAN 1' FROM FIRE SPRINKLERS OR 3' FROM ANY SUPPLY DIFFUSER. IN AREA OF CONSTRUCTION OR POSSIBLE DAMAGE/CONTAMINATION ON NEWLY INSTALLED FIRE ALARM DEVICES SHALL BE COVERED UNTIL THAT AREA IS READY TO BE TURNED OVER TO THE OWNER.
- ALL FIRE ALARM CIRCUITS SHALL BE IN CONDUIT, SURFACE RACEWAY OR OPEN RUN ABOVE CEILINGS, AND IN WALLS IN A NEAT AND PROTECTED MANNER AS INDICATED ON DESIGN DOCUMENTS. EXPOSED CIRCUIT ARE ONLY PERMITTED WHEN NOTED AS EXPOSED ON DESIGN DOCUMENTS.
- FIRE ALARM PANEL, REMOTES, AND COMPONENTS SHALL BE SECURED TO MOUNTING SURFACES PER MANUFACTURER SPECIFICATIONS. NO SINGLE DEVICE SHALL EXCEED THE WEIGHT OF 20 LBS. WITHOUT SPECIAL MOUNTING DETAILS. IT IS THE INTENT OF THIS PROJECT THAT THE EXISTING FACP BE PROTECTED AND RECONNECTED IN PLACE.
- A DEDICATED BRANCH CIRCUIT SHALL BE PROVIDED FOR FIRE ALARM EQUIPMENT. THIS CIRCUIT SHALL BE ENERGIZED FROM THE COMMON USE AREA PANEL AND SHALL HAVE NO OTHER OUTLETS. THE BREAKER SHALL HAVE A RED LOCKING DEVICE TO BLOCK THE HANDLE IN THE "ON" POSITION. THE CIRCUIT BREAKER SHALL BE LABELED "FIRE ALARM CIRCUIT CONTROL". CIRCUIT ID TO BE LABELED AT FIRE PANEL/EXTENDERS.
- THE INSTALLING CONTRACTOR SHALL PROVIDE A RECORD OF COMPLETION PER NFPA 72, FIGURE 10.18.2.1.1.
- CONTROL PANELS SHALL BE INSTALLED WITH THEIR BOTTOMS MOUNTED AT 48".
- THE INSTALLING CONTRACTOR SHALL PROVIDE SYSTEM PROGRAMMING FOR SUPERVISORY MONITORING PER CBC SECTION 901.6.2.
- SUPERVISORY MONITORING SHALL BE TESTED AND VERIFIED AS SENDING CORRECT SIGNALS IN CONJUNCTION WITH FINAL ACCEPTANCE TEST.
- OWNER SHALL BE RESPONSIBLE FOR ESTABLISHING A FIRE SYSTEM MONITORING CONTRACT OR PROVISIONS.
- FIRE ALARM WIRING ABOVE THE ACCESSIBLE CEILINGS TO BE PLENUM RATED FPLP ON J-HOOKS, UON.
- ALL FIRE ALARM DEVICES SHALL BE CALIFORNIA STATE FIRE MARSHAL (CSFM) LISTED).
- THE FIRE ALARM SYSTEM SHALL BE INSTALLED COMPLETELY IN CONFORMANCE WITH ALL REQUIREMENTS OF SB575 GREEN OAK FAMILY ACADEMY ELEMENTARY SCHOOL FIRE PROTECTION ACT.
- SUPERVISORY STATION: AUTOMATIC FIRE ALARM SYSTEM SHALL TRANSMIT THE ALARM, SUPERVISORY, AND TROUBLE SIGNALS TO AN APPROVAL SUPERVISING STATION AS REQUIRED BY NFPA 72, AS AMENDED BY ARTICLE 91, THE FIRE ALARM SYSTEM IS TO BE MONITORED BY SCHOOL DISTRICT'S OFF-SITE U.L. CERTIFIED CENTRAL MONITORING STATION.

**GENERAL CONSTRUCTION NOTES**

- CONDUIT AND WIRING SHOWN ON DRAWINGS ARE DIAGRAMMATIC, EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD TO SUIT SITE CONDITIONS.
- LOCATION OF DEVICES SHOWN ON DRAWINGS ARE AS ACCURATE AS POSSIBLE, IF DEVICES CANNOT BE INSTALLED EXACTLY AS SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL INSTALL THEM AS CLOSE AS POSSIBLE TO THE INDICATED LOCATION. THE FINAL LOCATIONS OF ALL DEVICES SHALL BE RECORDED AND INCORPORATED INTO THE AS-BUILT DRAWINGS.
- PROVIDE ALL REQUIRED CUTTING, PATCHING, BACKFILL AND REPAIRS NECESSARY TO RESTORE DAMAGED SURFACES TO EQUAL OR BETTER THAN ORIGINAL CONDITIONS EXISTING. COORDINATE ALL WORK IN FIELD WITH GENERAL CONTRACTOR IN FIELD PRIOR TO START OF WORK.
- ALL NEW RACEWAYS AND CONDUCTORS SHALL BE INSTALLED CONCEALED WHERE POSSIBLE. FOR CONDUITS THAT ARE TO BE INSTALLED EXPOSED AND SURFACE MOUNTED ON EXISTING WALLS, CEILINGS AND/OR CONCRETE SURFACES SHALL BE NEATLY ROUTED AND SHALL RUN PARALLEL TO OR AT RIGHT ANGLES TO BUILDING LINES.
- WHERE DEVICES ARE INACCESSIBLE ABOVE THE CEILING, PROVIDE 24"x24" ACCESS PANEL IN THE CEILING AS REQUIRED BY CODE, WHETHER OR NOT SPECIFICALLY INDICATED ON DRAWINGS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE LOCATING ALL EXISTING UNDERGROUND SYSTEM IN THE AREA OF UNDERGROUND WORK. REPAIR ALL DAMAGED SYSTEMS TO OWNERS SATISFACTION. MAINTAIN EXTREME CARE DURING TRENCHING AS EXISTING SYSTEMS ARE KNOWN TO EXIST IN THE AREA. THE DRAWINGS AND SPECIFICATIONS ARE FOR THE ASSISTANCE AND GUIDANCE OF THE CONTRACTOR. EXACT LOCATIONS, DISTANCE AND ELEVATIONS SHALL BE GOVERNED BY ACTUAL CONDITIONS, COORDINATE THE CONTRACT DOCUMENTS AND FIELD CONDITIONS TO DETERMINE EXACT ROUTING AND FINAL TERMINATIONS FOR ALL WORK.
- SUFFICIENT ACCESS AND WORKING SPACE SHALL BE PROVIDED AND MAINTAINED ABOUT ALL ELECTRIC EQUIPMENT TO PERMIT READY AND SAFETY OPERATION AND MAINTENANCE OF SUCH EQUIPMENT PER CEC ARTICLE 110-16.
- ALL CONDUITS SHALL BE MINIMUM 3/4", U.O.N. POWER BRANCH CIRCUITS SHALL BE A MINIMUM TWO (2) #12 AWG AND ONE (1) #12 AWG GROUND TYPE THWN/THHN.
- ALL ELECTRICAL EQUIPMENT INSTALLED OUTDOORS SHALL BE WEATHERPROOF. EXTERIOR CONDUIT RUNS INTO BUILDING SHALL INSTALLED WITH FLASHING, CAULKED AND SEALED. CONDUITS FOR EXTERIOR ELECTRICAL DEVICES SHALL BE RUN INSIDE BUILDING, UNLESS OTHERWISE NOTED ON DRAWINGS.
- ALL INSTALLATION OF EXPOSED SURFACE MOUNTED RACEWAYS IN OFFICES, CLASSROOMS AND IN PUBLIC AREAS SHALL BE VERIFIED AND DETERMINED IN FIELD FOR THE BEST POSSIBLE WAY OF CONDUIT ROUTING PRIOR TO ROUGH-IN. CONTRACTOR IS TO DETERMINE THE ACCESSIBILITY OF ATTIC, FURRED SPACES, HOLLOW MILLIONS AND SOFFIT, ETC. IN SUCH AREA IF THE SYSTEM CAN BE ROUTED EITHER BY FISHING OR ACCESSIBILITY. CONTRACTOR IS TO DO SO, IF INACCESSIBILITY IS DETERMINED, CONTRACTOR SHALL INSTALL SURFACE MOUNTED RACEWAY IN THE MOST AESTHETICALLY PLEASING MEANS AS POSSIBLE IN FIELD.
- FOR ALL EXISTING FIRE ALARM EQUIPMENT CONTROL PANELS AND REMOTE POWER SUPPLIES THAT ARE TO BE REPLACED WITH NEW, RETAIN ALL EXISTING DEDICATED 120V CIRCUITS IN PLACE AND REUSE THEM FOR DEDICATED POWER CONNECTIONS TO ALL NEW REPLACEMENT PANELS AND POWER SUPPLIES WHEREVER AVAILABLE.
- CONTRACTOR SHALL FIELD VERIFY THE EXTENT OF ELECTRICAL DEMOLITION WORK AND QUANTITIES OF ELECTRICAL TO BE REMOVED AS DICTATED BY THE REQUIREMENTS OF THE PROJECT. ALL EXISTING WALL, ABOVE AND BELOW CEILING MOUNTED FIRE ALARM DEVICES, EQUIPMENT, ASSOCIATED FIRE ALARM U-BOXES, CONDUITS AND WIRES SHALL BE REMOVED, DISPOSED, AND/OR SALVAGED AS DIRECTED BY THE SCHOOL DISTRICT, UNLESS OTHERWISE NOTED ON DRAWINGS TO REMAIN AND/OR TO BE RECONNECTED. CONTRACTOR TO VERIFY IN FIELD AND TO DETERMINE FOR THE POSSIBILITY OF UTILIZING SOME OF THE EXISTING REMAINING SURFACE CONDUITS AND BOXES AND MAY REUSE THEM TO FACILITATE FOR THE INSTALLATION OF NEW FIRE ALARM DEVICES AND WIRING WHERE POSSIBLE.
- ALL EXISTING RECESSED OUTLET BOXES AND RACEWAYS IN EXISTING WALLS THAT ARE TO REMAIN MAY BE ABANDONED IN PLACE. REMOVE WIRING IN RACEWAY AND PROVIDE A BLANK COVER PLATE OVER EXISTING OUTLET BOX. THE EXISTING REMAINING CONCEALED BOXES AND RACEWAYS MAY BE REUSED FOR NEW WORK PROVIDED THEY MEET ALL REQUIREMENTS OF THIS SPECIFICATION FOR NEW WORK.

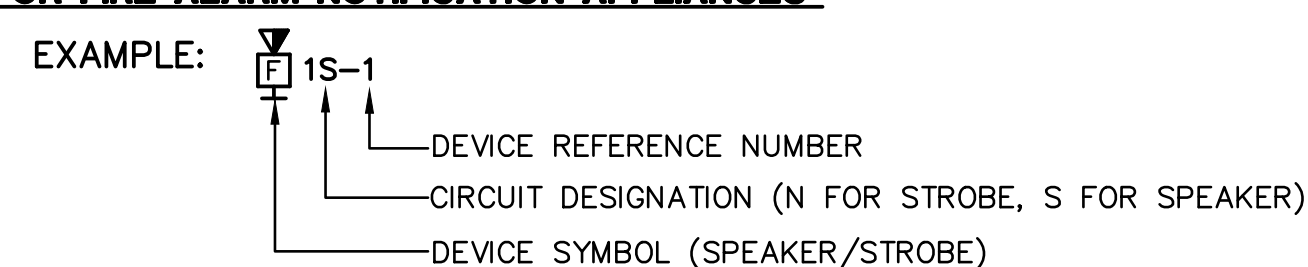
**DEVICE AND CABLE DESIGNATION LEGEND**

**FOR FIRE ALARM INITIATING DEVICES**



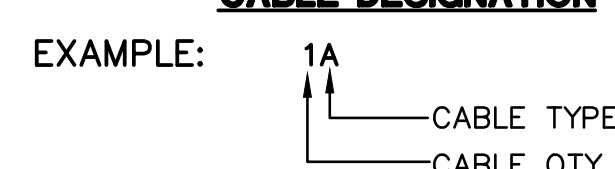
ABOVE EXAMPLE MEANS "5TH DEVICE IN LOOP 1D"

**FOR FIRE ALARM NOTIFICATION APPLIANCES**



ABOVE EXAMPLE MEANS "1st" DEVICE IN CKT. "A1"

**CABLE DESIGNATION**



**WIRING SCHEDULE**

WIRE SYMBOL	WIRE DESCRIPTION	APPLICATION
<b>A</b>	2#16 AWG, TWISTED SHIELDED PAIR (USE AQUASEAL UNDERGROUND)	DATA AND INITIATING CIRCUIT SLC LOOP
<b>B</b>	2#16 AWG TWISTED PAIR	AUDIBLE CIRCUIT
<b>C</b>	2#12 AWG THHN	NOTIFICATION CIRCUIT
<b>D</b>	2#14 AWG THHN	NOTIFICATION CIRCUIT
<b>E</b>	2#12 AWG THHN	FOPS ACTIVATION

**FIRE ALARM SYSTEM OPERATION MATRIX**

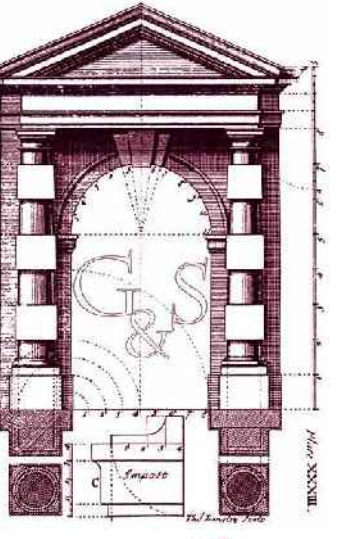
CAUSE	EFFECT												REMARKS
	ALARM AT FACP	ALARM AT ANNUNCIATOR	ACTIVATE F.A. PANEL	ACTIVATE AUDIBLES	ACTIVATE VISUALS	TROUBLE AT FACP	TROUBLE AT ANNUNCIATOR	TROUBLE AT OFF SITE REPORTING	SUPERVISORY AT FACP	SUPERVISORY AT ANNUNCIATOR	SUPERVISORY AT OFF SITE REPORTING	MISC.	
DUCT SMOKE DETECTORS	•	•	•	•	•								B, D
SMOKE DETECTORS	•	•	•	•	•								A
HEAT DETECTORS	•	•	•	•	•								A
MANUAL PULL STATIONS	•	•	•	•	•								A
FIRE RISER FLOW SWITCH	•	•	•	•	•								A
FIRE RISER TAMPER SWITCH									•	•			B
SYSTEM RESET													
SIGNAL SILENCE						•	•	•					C
AC POWER FAILURE						•	•	•					C
FIRE ALARM TROUBLE (OPEN, SHORTS, OR GROUNDS) ON INITIATION OR SIGNALING CIRCUITS						•	•	•					C

**REMARKS:**

- MANUAL "ACKNOWLEDGE" FUNCTION AT CONTROL UNIT AND REMOTE ANNUNCIATOR, SILENCE AUDIBLE ALARM L. VISUAL ALARM REMAINS UNTIL INITIATING ALARM IS CLEARED.
- MANUAL "ACKNOWLEDGE" FUNCTION AT CONTROL UNIT AND REMOTE ANNUNCIATOR, SILENCE AUDIBLE SUPERVISORY SIGNAL, VISUAL SIGNAL REMAINS DISPLAYED UNTIL INITIATING SUPERVISORY IS CLEARED.
- MANUAL "ACKNOWLEDGE" FUNCTION AT CONTROL UNIT AND REMOTE ANNUNCIATOR, SILENCE AUDIBLE TROUBLE SIGNAL, VISUAL SIGNAL REMAINS DISPLAYED UNTIL INITIATING TROUBLE IS CLEARED.
- CAUSE GLOBAL SHUT DOWN OF ASSOCIATED HVAC EQUIPMENT WITHIN THE BUILDING WHEN HVAC DUCT SMOKE DETECTORS ARE ACTIVATED AND SHALL ACTIVATE LOCAL FIRE/SMOKE DAMPERS THROUGHOUT THE AFFECTED AREAS.



**ACKERMAN**  
CONSOLIDATED TECHNICAL SERVICES  
801 E. CHARLESTON ROAD  
PALO ALTO, CA 94306  
650 . 965 . 1000 FAX: 650 . 494 . 9312  
A-P PROJECT NUMBER: 16021



Revision:	Date:
95% DD	9/14/16

**FIRE ALARM MODERNIZATION**  
**FOOTHILL HIGH SCHOOL**  
230 PALA AVE.  
SAN JOSE, CA 95127

**OWNER:**  
East Side Union  
High School District  
830 North Capitol Ave  
San Jose, CA 95133  
P: (408)347-5000  
F: (408)347-5045

**GENERAL CONTRACTOR:**  
Gonsalves & Stronck Const. Co., Inc.  
1000 Washington Street  
San Carlos, CA 94070-5319  
P:

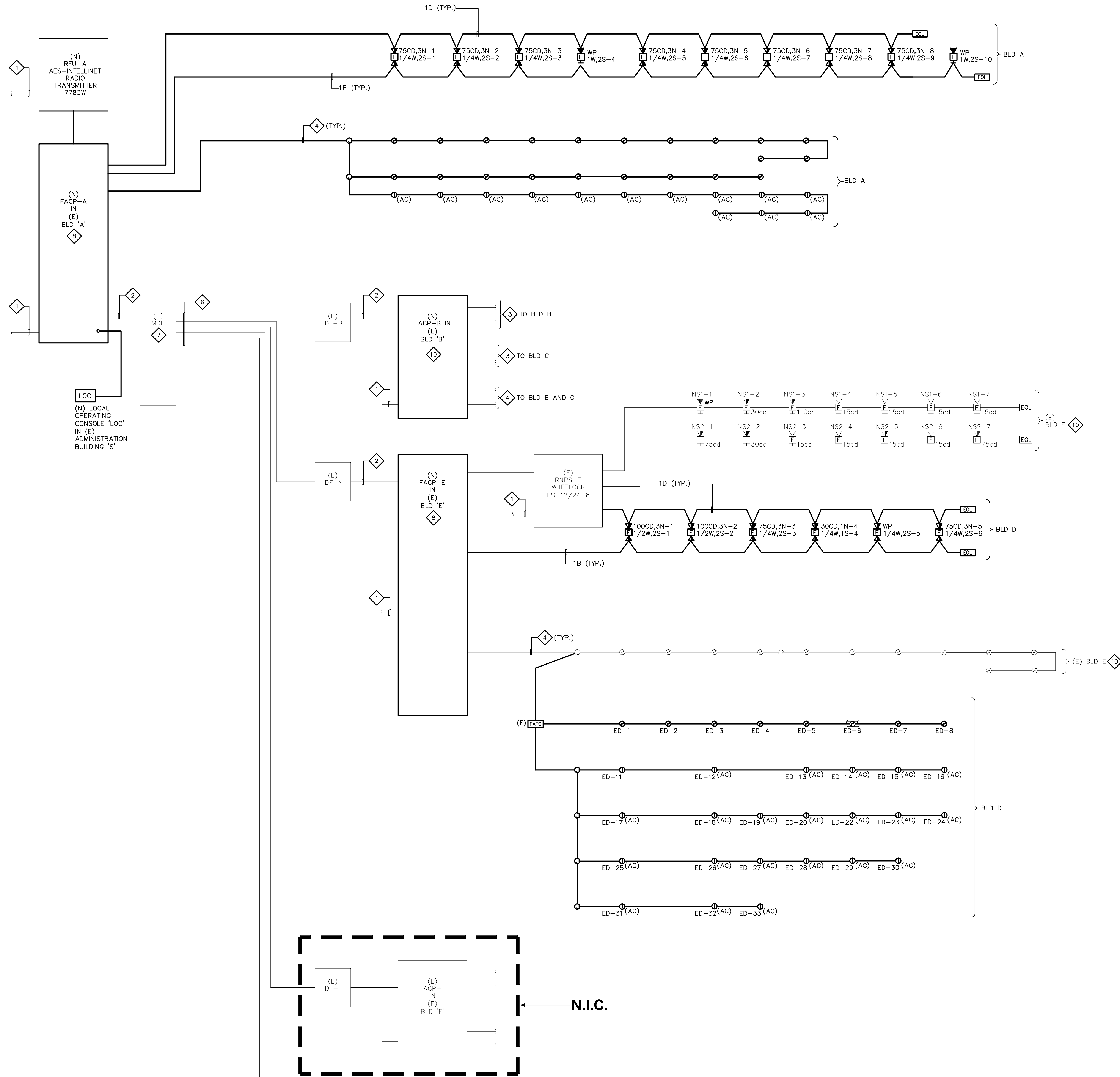
**FIRE ALARM CONSULTANT:**  
INTREPID  
6300 San Ignacio Ave.  
San Jose, CA 95119-1213  
P: (510) 597-9966  
F: (510) 597-9980

**ELECTRICAL CONTRACTOR:**  
Smith & Sons Electric, Inc.  
44081 South Grimmer Blvd.  
Fremont, CA 94538-6382  
P: (510) 651-4994

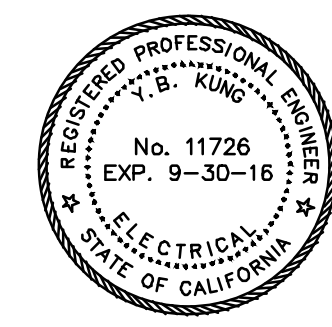
Job No.:	16021
Drawn By:	AP
Date:	05-23-2016
Eng. Approval:	DAVID KUNG
PM Approval:	DAVID KUNG
Scale:	AS SHOWN

Sheet Title:  
**FIRE ALARM**  
**RISER DIAGRAM**

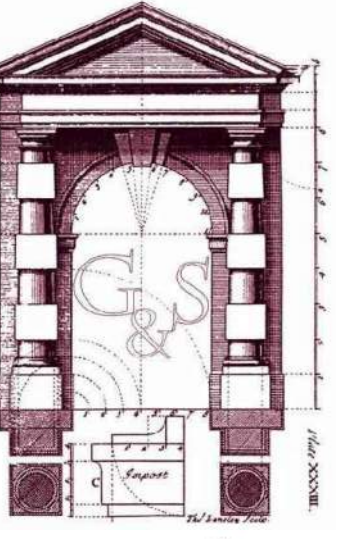
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SEE DRAWING FA0.3 FOR CONTINUATION



**ACKERMAN PRACTICON**  
CONSOLIDATED TECHNICAL SERVICES  
801 E. CHARLESTON ROAD  
PALO ALTO, CA 94303  
650 . 965 . 1000 FAX: 650 . 494 . 9312  
A-P PROJECT NUMBER: 16021



Revision:	Date:
95% DD	9/14/16

**FIRE ALARM MODERNIZATION**  
**FOOTHILL HIGH SCHOOL**  
230 PALA AVE.  
SAN JOSE, CA 95127

**OWNER:**  
East Side Union  
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P:

**FIRE ALARM CONSULTANT:**  
INTREPID  
6300 San Ignacio Ave.  
San Jose, CA 95119-1213  
P: (510) 597-9966  
F: (510) 597-9980

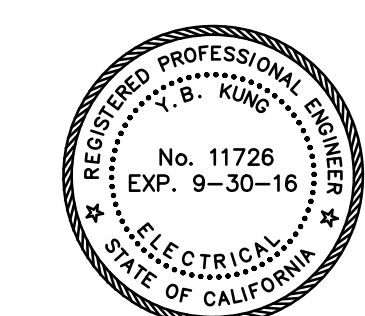
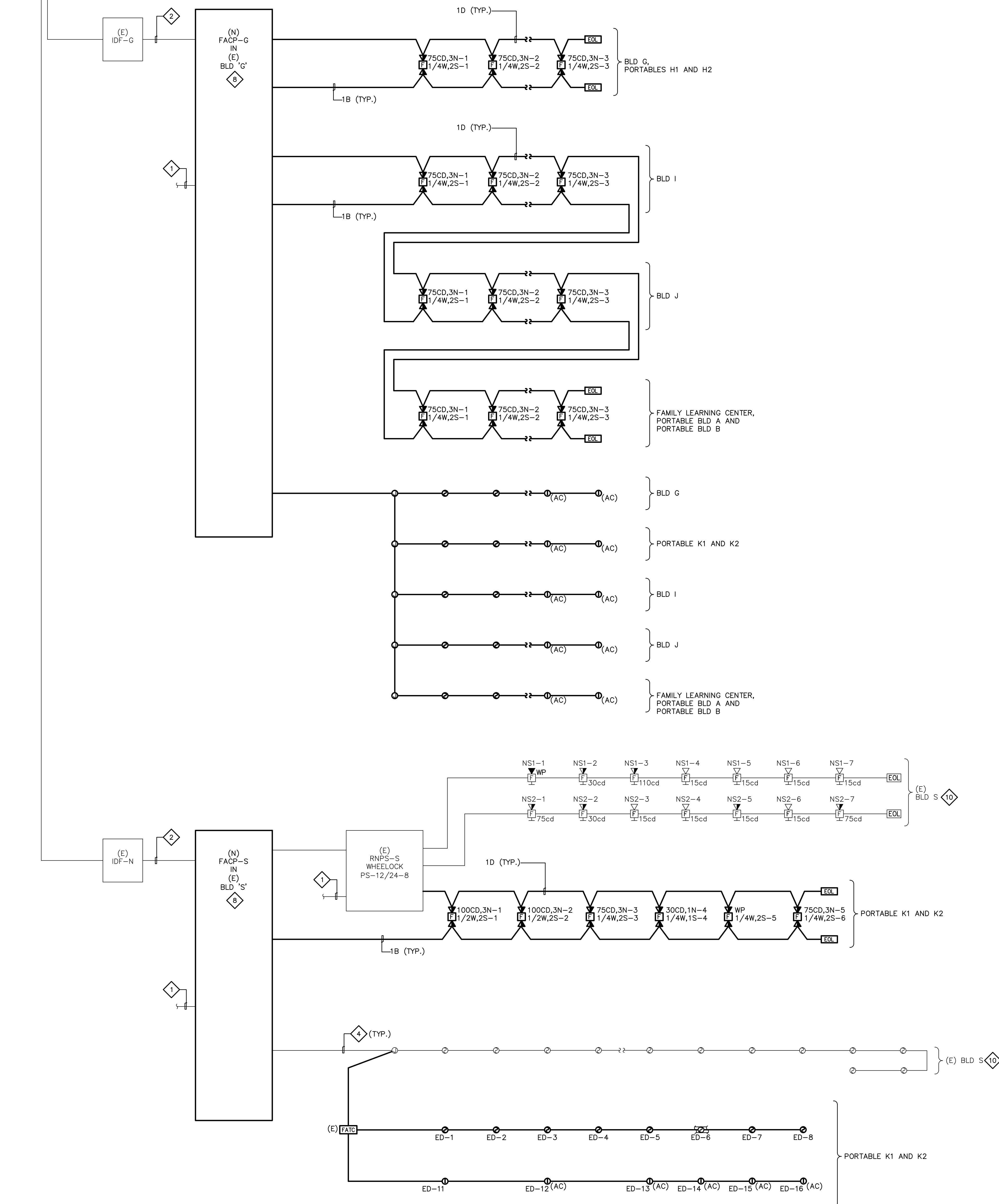
**ELECTRICAL CONTRACTOR:**  
Smith & Sons Electric, Inc.  
44081 South Grimmer Blvd.  
Fremont, CA 94538-6382  
P: (510) 651-4994

Job No.:	16021
Drawn By:	AP
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Eng. Approval:	DAVID KUNG
PM Approval:	DAVID KUNG
Scale:	AS SHOWN

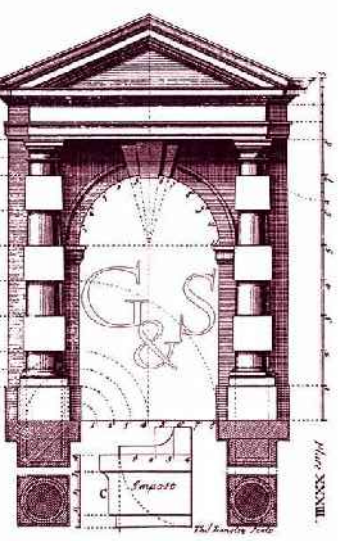
Sheet Title:  
**FIRE ALARM  
RISER DIAGRAM**

Sheet No.:

SEE DRAWING FA0.2  
FOR CONTINUATION



**ACKERMAN PRACTICON**  
CONSOLIDATED TECHNICAL SERVICES  
801 E. CHARLESTON ROAD  
PALO ALTO, CA 94303  
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A-P PROJECT NUMBER: 16021



Revision:	Date:
95% DD	9/14/16

**FIRE ALARM MODERNIZATION**  
**FOOTHILL HIGH SCHOOL**  
**230 PALA AVE.**  
**SAN JOSE, CA 95127**

BATTERY CALCULATION -		FACP - A		STYLE L	
QTY	MODEL NO	DEVICE DESCRIPTION		STANDBY	ALARM
		EACH	TOTAL	EACH	TOTAL
1	ES SERIES	ADDRESSABLE FA CONTROL UNIT EQUIPMENT:			
1	ILB5-MB-E3	0.05	0.05	0.028	0.028
1	RPT-E3-UPT	0.016	0.016	0.015	0.015
1	PM-9	0.05	0.05	0.05	0.05
1	FML-E3	0.053	0.106	0.053	0.106
(E)	XP95-T	0.00025	0.0005	0.004	0.004
(E)	XP95-P	0.00034	0.00068	0.00434	0.00868
(E)	XP95-PD	0.01	0.02	0.055	0.11
(E)	MS-95	0.0005	0.001	0.0015	0.003
(E)	PID95	0.0005	0.001	0.0015	0.003
PANEL STANDBY CURRENT					
PANEL ALARM CURRENT					
<b>TOTAL SYSTEM CURRENT</b>					
DESCRIPTION					
TOTAL STANDBY CURRENT (A)					
X 24 HOUR STANDBY					
TOTAL ALARM CURRENT (B)					
5 MINUTES OF ALARM (X 0.083)					
TOTAL BATTERY REQUIREMENT (A+B)					
SAFETY MARGIN (25%)					
BATTERY SUPPLIED (2) 12V					

BATTERY CALCULATION -		FACP - LG		STYLE F	
QTY	MODEL NO	DEVICE DESCRIPTION		STANDBY	ALARM
		EACH	TOTAL	EACH	TOTAL
1	ES SERIES	ADDRESSABLE FA CONTROL UNIT EQUIPMENT:			
1	ILB5-MB-E3	0.05	0.05	0.091	0.091
1	RPT-E3-UPT	0.016	0.016	0.017	0.017
1	PM-9	0.05	0.05	0.05	0.05
2	FML-E3	0.053	0.106	0.053	0.106
(E)	XP95-T	0.00025	0.0005	0.004	0.008
(E)	XP95-P	0.00034	0.00068	0.00434	0.00868
(E)	XP95-PD	0.01	0.02	0.055	0.11
(E)	MS-95	0.0005	0.001	0.0015	0.003
(E)	PID95	0.0005	0.001	0.0015	0.003
PANEL STANDBY CURRENT					
PANEL ALARM CURRENT					
<b>TOTAL SYSTEM CURRENT</b>					
DESCRIPTION					
TOTAL STANDBY CURRENT (A)					
X 24 HOUR STANDBY					
TOTAL ALARM CURRENT (B)					
5 MINUTES OF ALARM (X 0.083)					
TOTAL BATTERY REQUIREMENT (A+B)					
SAFETY MARGIN (25%)					
BATTERY SUPPLIED (2) 12V					

BATTERY CALCULATION -		FACP - B		STYLE B	
QTY	MODEL NO	DEVICE DESCRIPTION		STANDBY	ALARM
		EACH	TOTAL	EACH	TOTAL
1	ES SERIES	ADDRESSABLE FA CONTROL UNIT EQUIPMENT:			
1	ILB5-MB-E3	0.05	0.05	0.091	0.091
1	RPT-E3-UPT	0.016	0.016	0.017	0.017
1	PM-9	0.05	0.05	0.05	0.05
2	FML-E3	0.053	0.106	0.053	0.106
(E)	XP95-P	0.00034	0.00068	0.00434	0.00868
(E)	PID95	0.0005	0.001	0.0015	0.003
(E)	AS-24MCW-FR	0	0	0.179	1.253
(E)	AH24WP	0	0	0.041	0.082
(E)	RSS-24MCW-FR	0	0	0.041	0.041
PANEL STANDBY CURRENT					
PANEL ALARM CURRENT					
<b>TOTAL SYSTEM CURRENT</b>					
DESCRIPTION					
TOTAL STANDBY CURRENT (A)					
X 24 HOUR STANDBY					
TOTAL ALARM CURRENT (B)					
5 MINUTES OF ALARM (X 0.083)					
TOTAL BATTERY REQUIREMENT (A+B)					
SAFETY MARGIN (25%)					
BATTERY SUPPLIED (2) 12V					

BATTERY CALCULATION -		FACP - S		STYLE G*	
QTY	MODEL NO	DEVICE DESCRIPTION		STANDBY	ALARM
		EACH	TOTAL	EACH	TOTAL
1	ES SERIES	ADDRESSABLE FA CONTROL UNIT EQUIPMENT:			
1	ILB5-MB-E3	0.05	0.05	0.091	0.091
1	RPT-E3-UPT	0.016	0.016	0.017	0.017
1	PM-9	0.05	0.05	0.05	0.05
2	FML-E3	0.053	0.106	0.053	0.106
1	AM-50-70	0.049	0.049	2.3	2.3
1	1100-1323	0.15	0.15	0.15	0.15
(E)	GAMEWELL PEER TO PEER	0.15	0.15	0.15	0.132
20	ASD-PL2FR	0.0003	0.01224	0.0065	0.132
30	ATD-PL2F	0.0003	0.00925	0.0065	0.15624
ASD-PL2F-DNR	DUCT SMOKE DETECTOR	0.044	0.02	0.052	0.11
PID-95	ADDRESSABLE MONITOR MODULE	0.0005	0.0005	0.0015	0.11
19	SMOKE DETECTOR	0.00034	0.0005	0.00434	0.11
13	HEAT DETECTOR	0.00025	0.0005	0.004	0.11
PANEL STANDBY CURRENT					
PANEL ALARM CURRENT					
<b>TOTAL SYSTEM CURRENT</b>					
DESCRIPTION					
TOTAL STANDBY CURRENT (A)					
X 24 HOUR STANDBY					
TOTAL ALARM CURRENT (B)					
5 MINUTES OF ALARM (X 0.083)					
TOTAL BATTERY REQUIREMENT (A+B)					
SAFETY MARGIN (25%)					
BATTERY SUPPLIED (2) 12V					

BATTERY CALCULATION -		FACP - E		STYLE G*	
QTY	MODEL NO	DEVICE DESCRIPTION		STANDBY	ALARM
		EACH	TOTAL	EACH	TOTAL
1	ES SERIES	ADDRESSABLE FA CONTROL UNIT EQUIPMENT:			
1	ILB5-MB-E3	0.05	0.05	0.091	0.091
1	RPT-E3-UPT	0.016	0.016	0.017	0.017
1	PM-9	0.05	0.05	0.05	0.05
2	FML-E3	0.053	0.106	0.053	0.106
1	AM-50-70	0.049	0.049	2.3	2.3
1	1100-1323	0.15	0.15	0.15	0.15
(E)	GAMEWELL PEER TO PEER	0.15	0.15	0.15	0.132
18	ASD-PL2FR	0.0003	0.01224	0.0065	0.132
28	ATD-PL2F	0.0003	0.00925	0.0065	0.15624
ASD-PL2F-DNR	DUCT SMOKE DETECTOR	0.044	0.02	0.052	0.11
PID-95	ADDRESSABLE MONITOR MODULE	0.0005	0.0005	0.0015	0.11
PANEL STANDBY CURRENT					
PANEL ALARM CURRENT					
<b>TOTAL SYSTEM CURRENT</b>					
DESCRIPTION					
TOTAL STANDBY CURRENT (A)					
X 24 HOUR STANDBY					
TOTAL ALARM CURRENT (B)					
5 MINUTES OF ALARM (X 0.083)					
TOTAL BATTERY REQUIREMENT (A+B)					
SAFETY MARGIN (25%)					
BATTERY SUPPLIED (2) 12V					

BATTERY CALCULATIONS -FOOTHILL		FAS BATTERY CALCULATION -		RFU - S	
QTY	MODEL NO	DEVICE DESCRIPTION		STANDBY	Transmit
		EACH	TOTAL	EACH	TOTAL
1	AES 7788 W	0.30000	0.30000	1.6	1.6
PANEL STANDBY CURRENT					
PANEL ALARM CURRENT					
<b>TOTAL SYSTEM CURRENT</b>					
DESCRIPTION					
TOTAL STANDBY CURRENT (A)					
X 24 HOUR STANDBY					
TOTAL ALARM CURRENT (B)					
5 MINUTES OF TRANSMIT (X 0.083)					
TOTAL BATTERY REQUIREMENT (A+B)					
SAFETY MARGIN (25%)					
BATTERY SUPPLIED (2) 12V					

OWNER:  
East Side Union  
High School District  
830 North Capitol Ave  
San Jose, CA 95133  
P: (408)347-5000  
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GENERAL CONTRACTOR:  
Gonsalves & Stronck Const. Co., Inc.  
1000 Washington Street  
San Carlos, CA 94070-5319  
P:

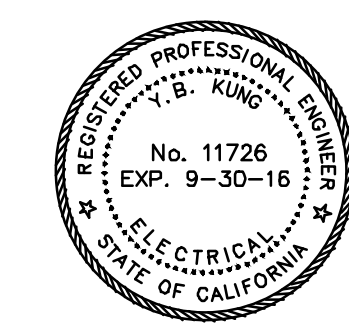
FIRE ALARM CONSULTANT:  
INTREPID  
6300 San Ignacio Ave.  
San Jose, CA 95119-1213  
P: (510) 597-9966  
F: (510) 597-9980

ELECTRICAL CONTRACTOR:  
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Fremont, CA 94538-6382  
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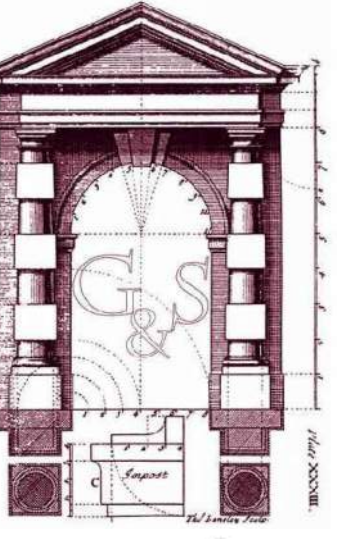
Job No.:	16021
Drawn By:	AP
Date:	05-23-2016
Eng. Approval:	DAVID KUNG
PM Approval:	DAVID KUNG
Scale:	AS SHOWN
Sheet Title:	FIRE ALARM BATTERY AND VOLTAGE DROP CALCULATIONS

Sheet No.:

**FA0.4**



**ACKERMAN PRACTICON**  
CONSOLIDATED TECHNICAL SERVICES  
801 E. CHARLESTON ROAD  
PALO ALTO, CA 94303  
650 . 965 . 1000 FAX: 650 . 494 . 9312  
A-P PROJECT NUMBER: 16021



Revision:	Date:
95% DD	9/14/16

**FIRE ALARM MODERNIZATION**  
**FOOTHILL HIGH SCHOOL**  
**230 PALA AVE.**  
**SAN JOSE, CA 95127**

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P:

**FIRE ALARM CONSULTANT:**  
INTREPID  
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San Jose, CA 95119-1213  
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F: (510) 597-9980

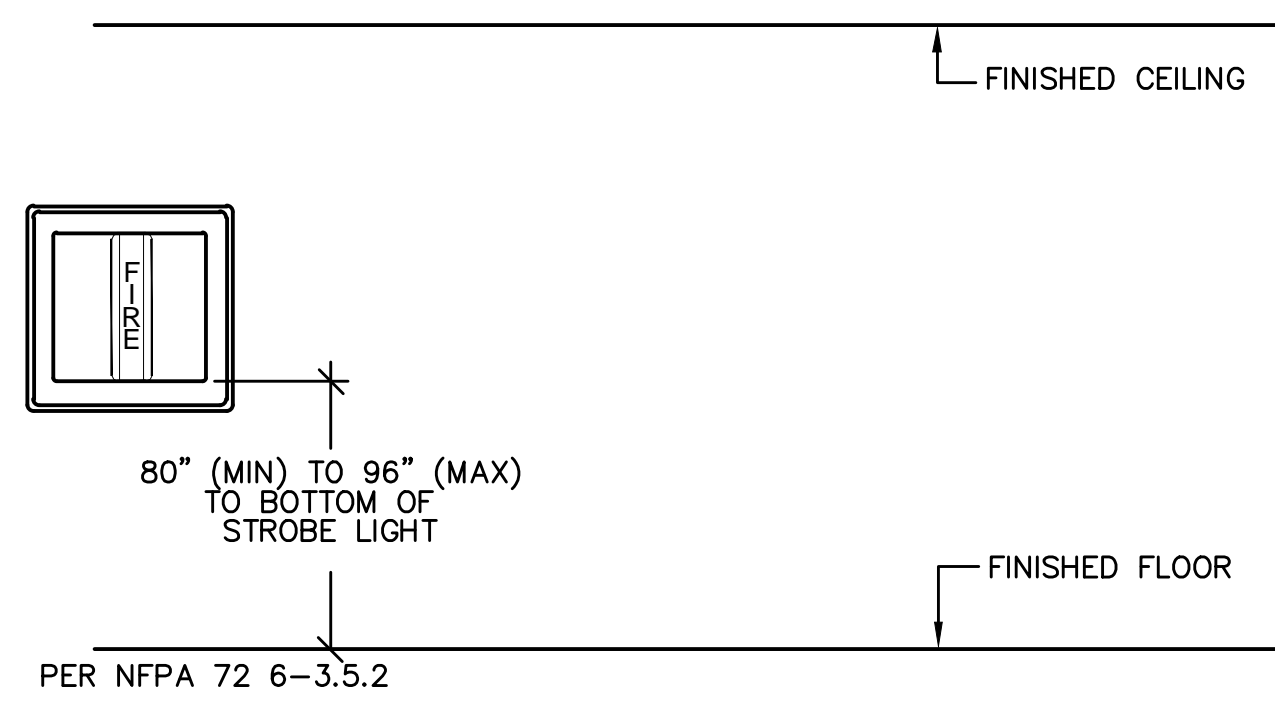
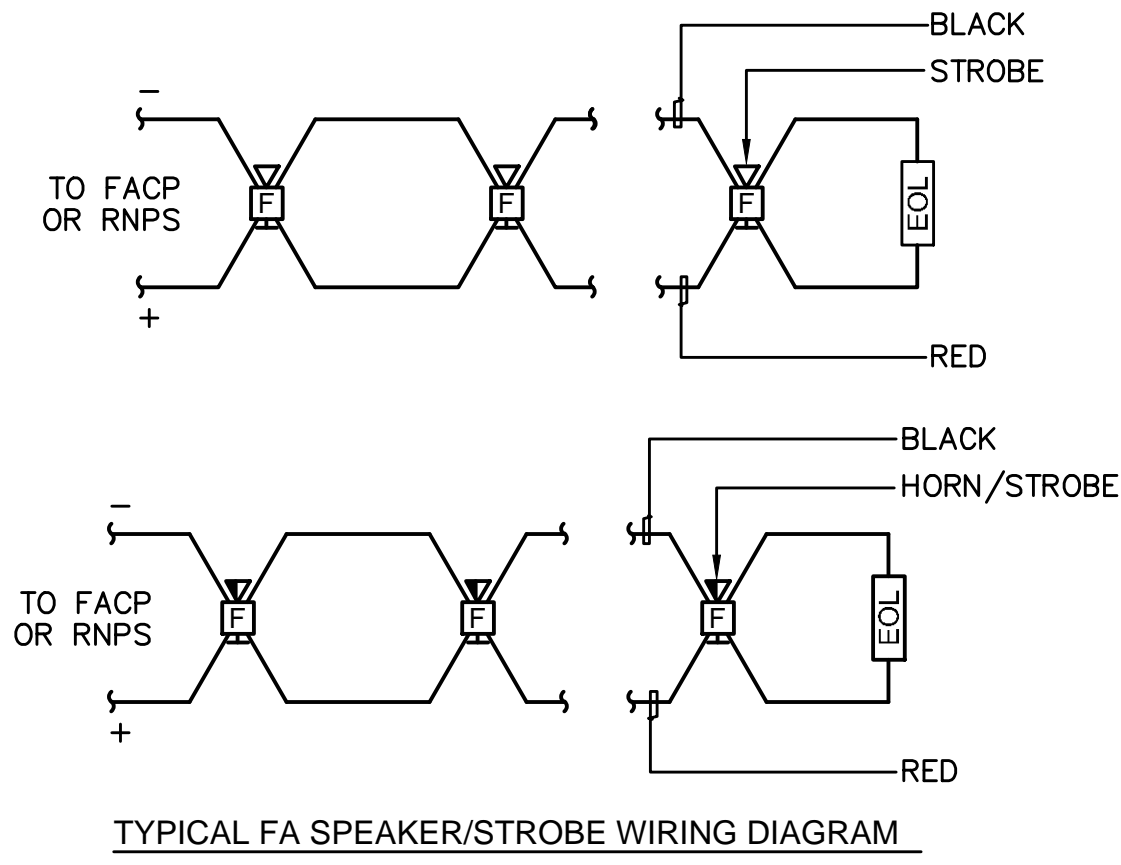
**ELECTRICAL CONTRACTOR:**  
Smith & Sons Electric, Inc.  
44081 South Grimmer Blvd.  
Fremont, CA 94538-6382  
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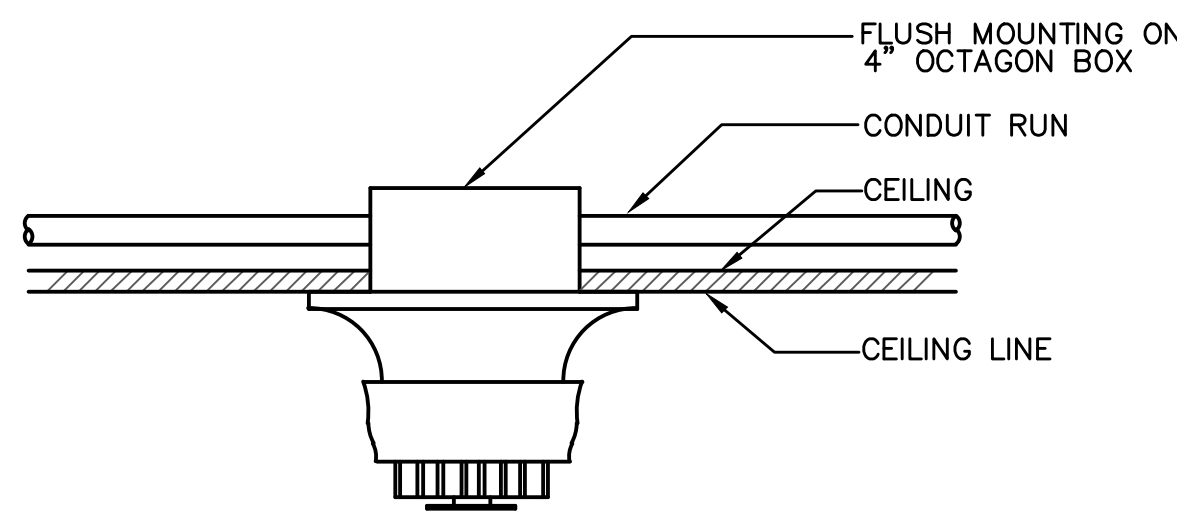
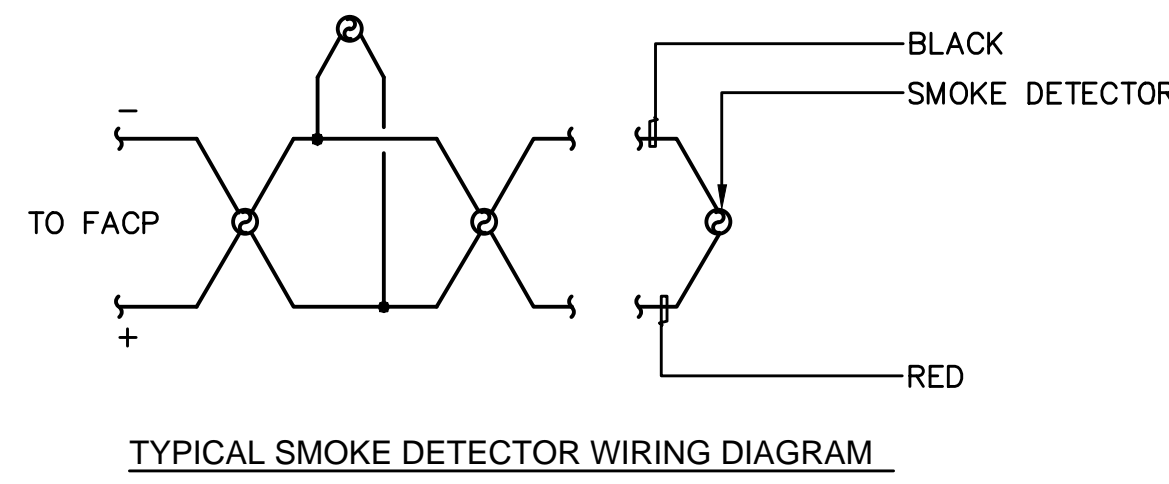
Sheet Title:  
**FIRE ALARM  
DETAILS**

Sheet No.:

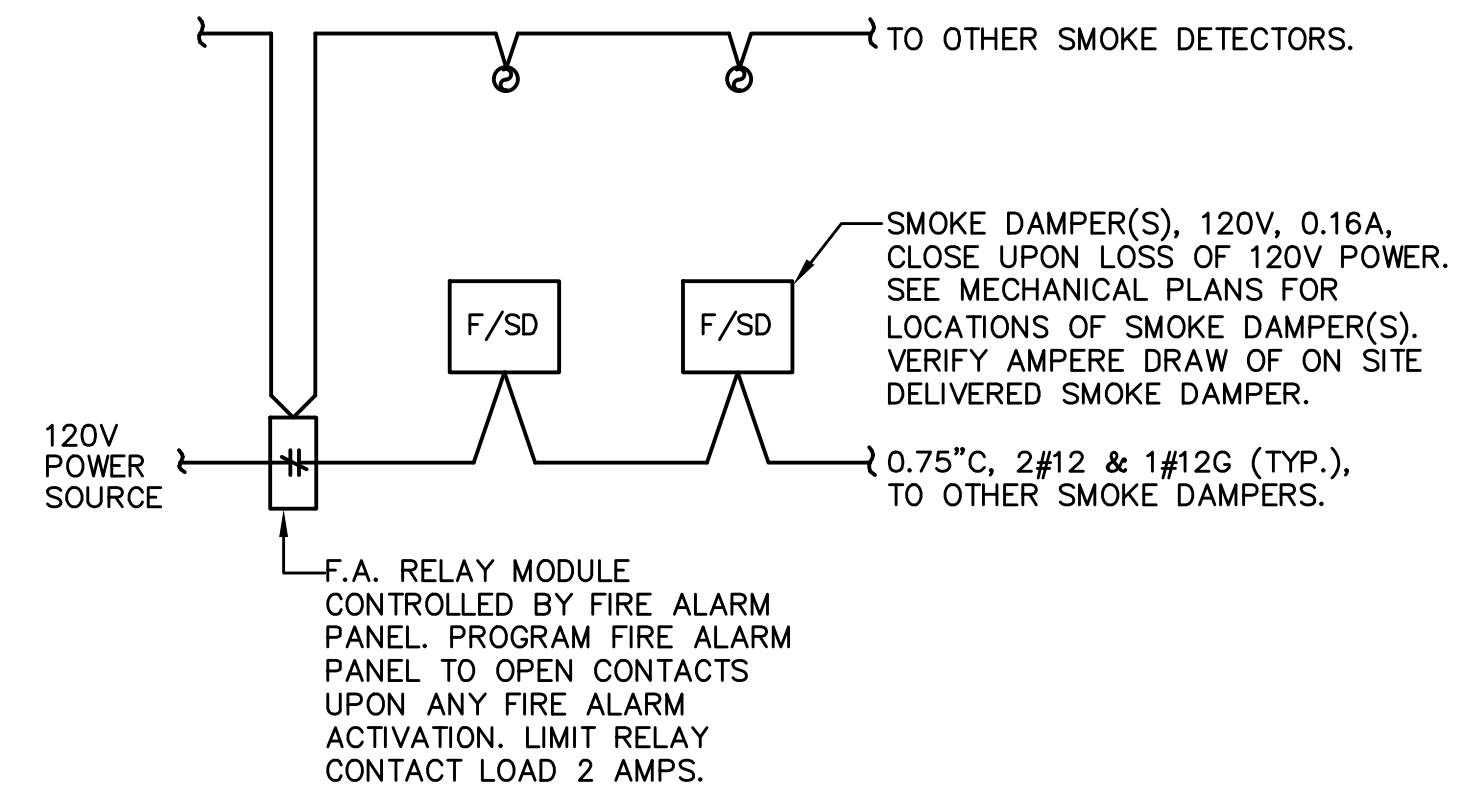
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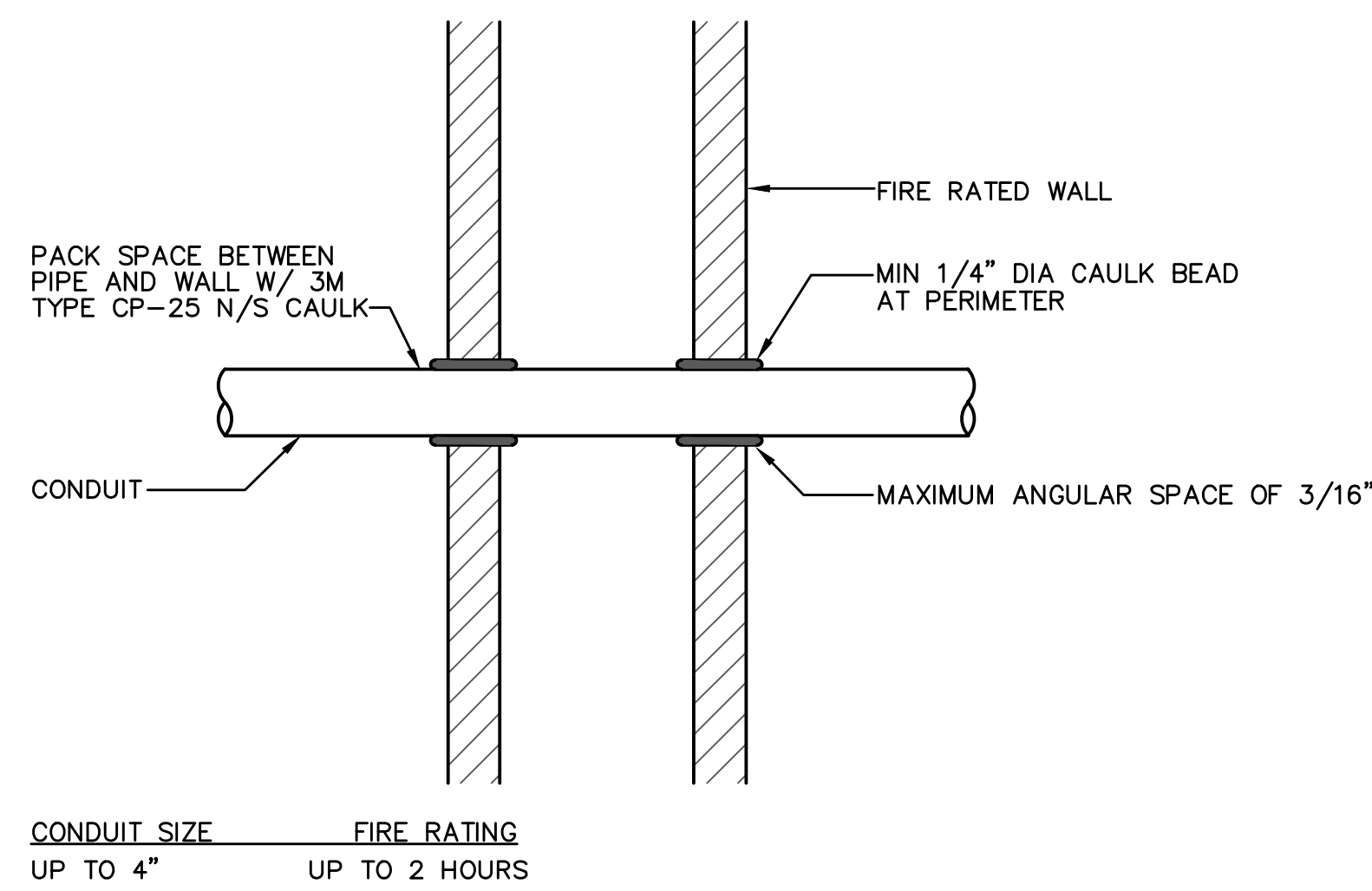
**7 FA SPEAKER/STROBE INSTALLATION**  
NOT TO SCALE



**4 ADDRESSABLE SMOKE DETECTOR INSTALLATION**  
NOT TO SCALE

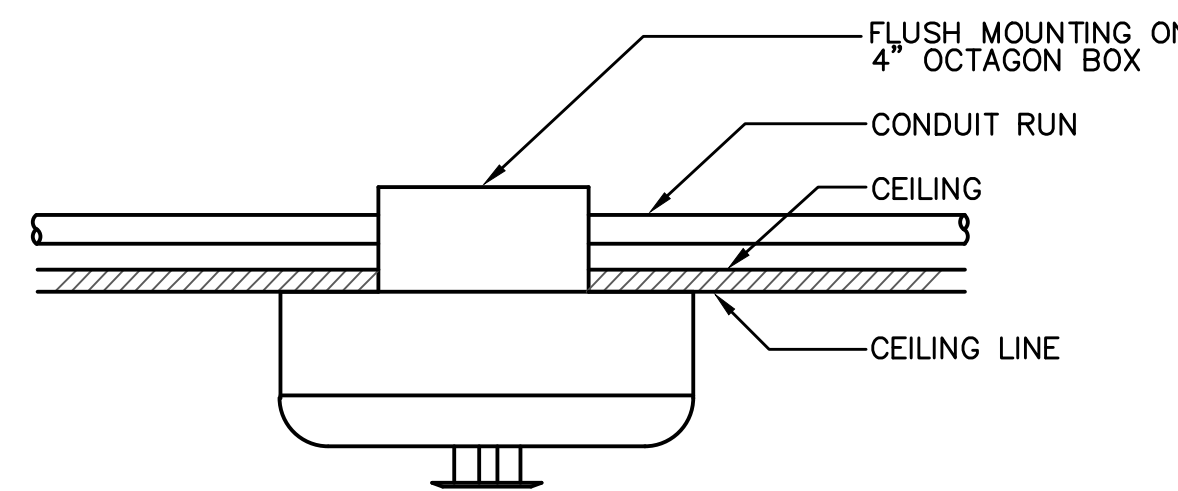
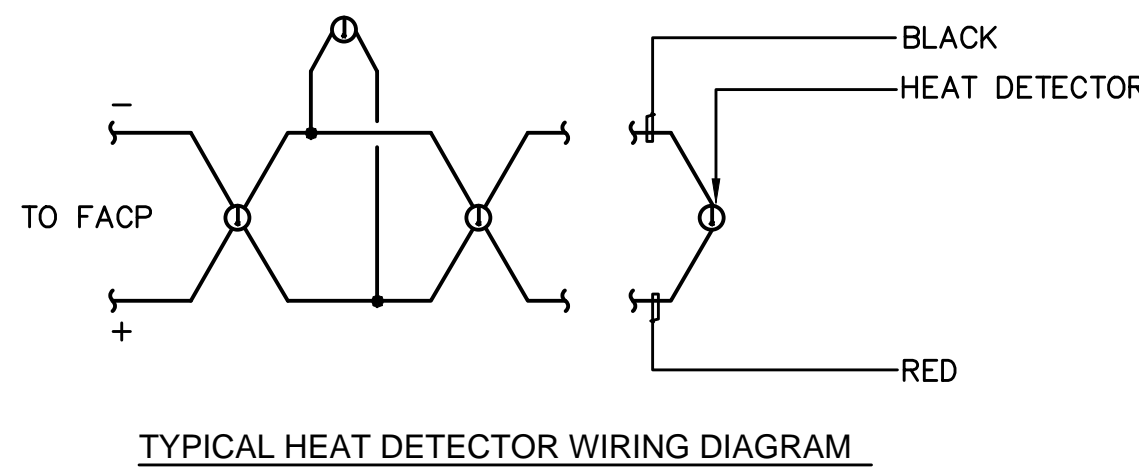


**1 FIRE/SMOKE DAMPER DETAIL**  
NOT TO SCALE

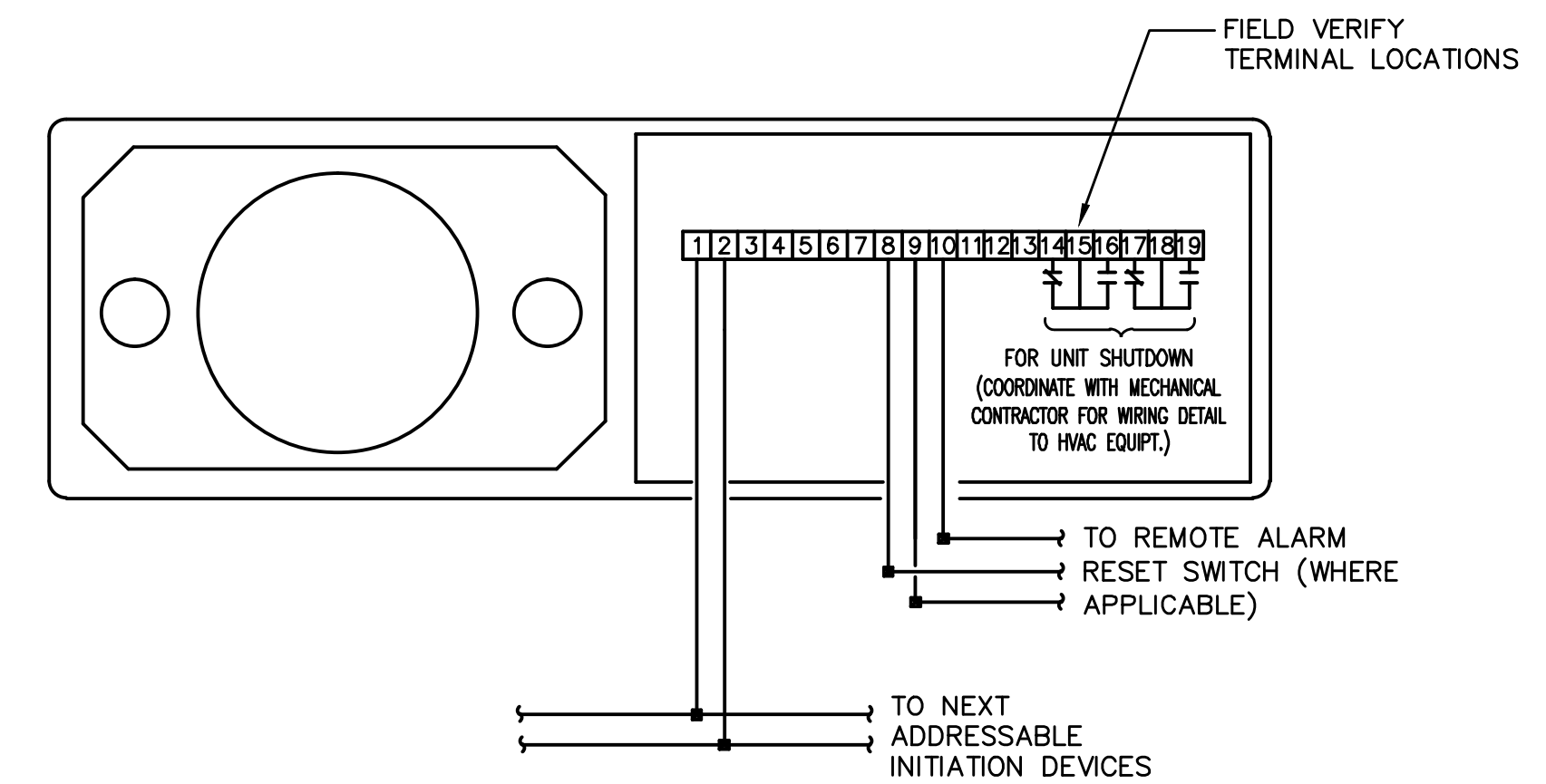


**DETAIL NOTES**  
1. SIMILAR TO U.L. FIRE RESISTANCE DIRECTORY SYSTEM W-L-1001.

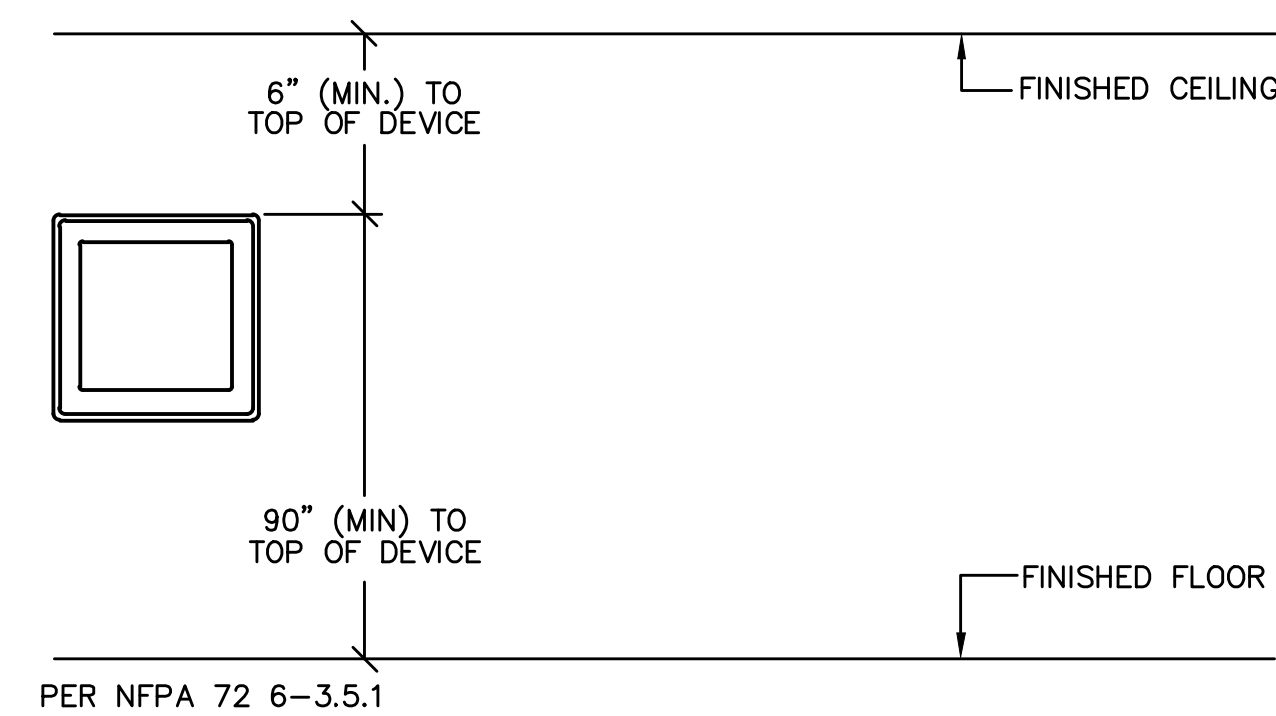
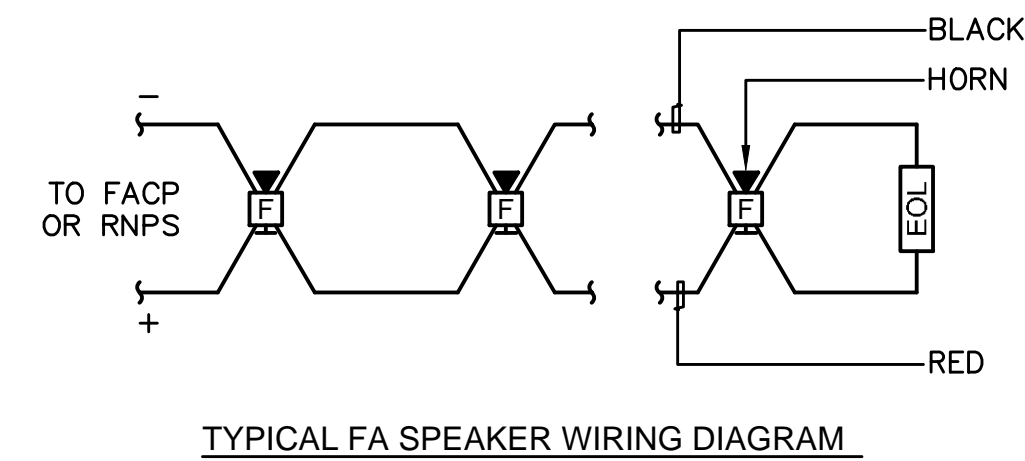
**8 THROUGH-PENETRATION FIRESTOP SYSTEM DETAIL**  
NOT TO SCALE



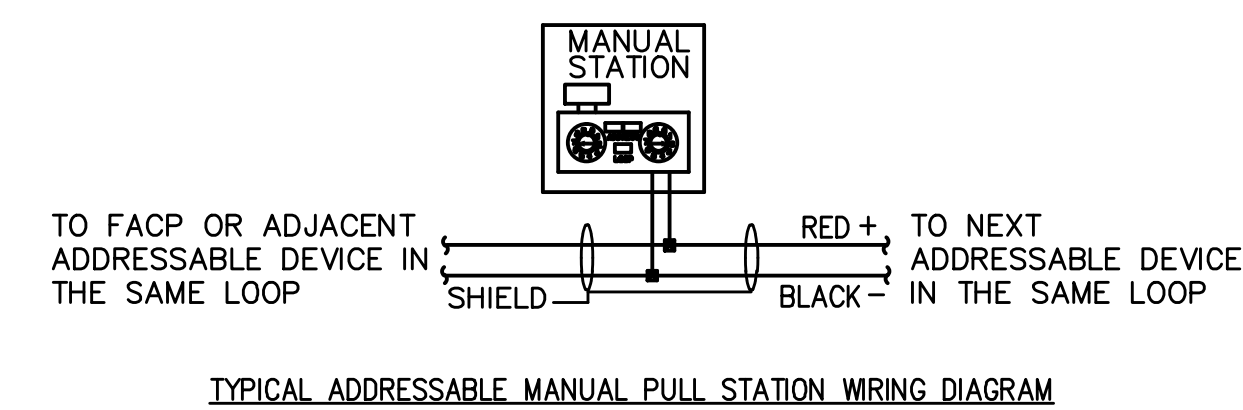
**5 ADDRESSABLE HEAT DETECTOR INSTALLATION**  
NOT TO SCALE



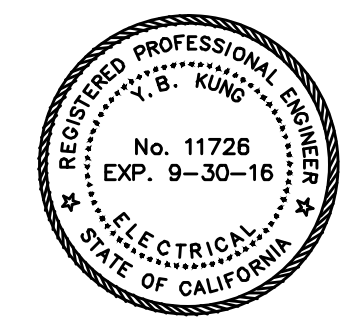
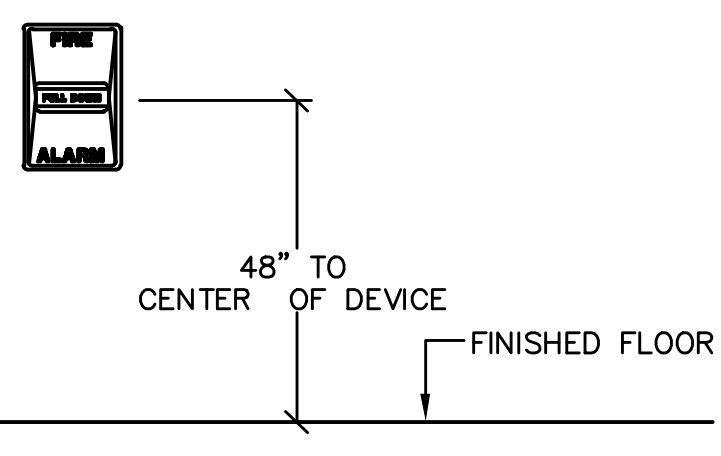
**2 TYPICAL DUCT SMOKE DETECTOR WIRING DIAGRAM**  
NOT TO SCALE



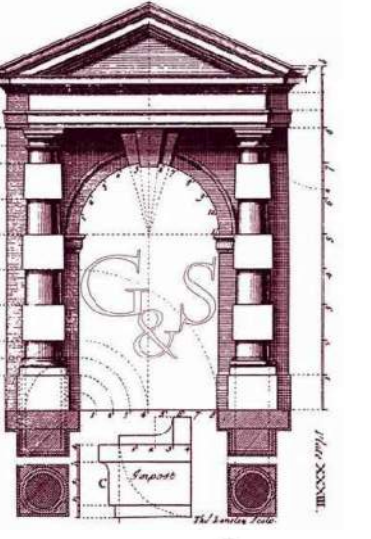
**6 FA SPEAKER INSTALLATION**  
NOT TO SCALE



**3 PULL STATION MOUNTING DETAIL**  
NOT TO SCALE



**ACKERMAN PRACTICON**  
CONSOLIDATED TECHNICAL SERVICES  
801 E. CHARLESTON ROAD  
PALO ALTO, CA 94303  
650 . 965 . 1000 FAX: 650 . 494 . 9312  
A-P PROJECT NUMBER: 16021



Revision:	Date:
95% DD	9/14/16

**GENERAL NOTES:**

- SEE SHEET FA0.0 AND FA0.1 FOR GENERAL PROJECT INFORMATION.

**SHEET NOTES:**

- (E) BUILDING TO BE MODERNIZED WITH COMPLETE FIRE ALARM SYSTEM UPGRADE, SEE DRAWING INDICATED FOR NEW FIRE ALARM WORK.
- NEW GAMEWELL-FCI E3 SERIES FIRE ALARM CONTROL PANEL TO REPLACE EXISTING FACP. ALL EXISTING FIRE ALARM DEVICES TO REMAIN AND RECONNECTED TO NEW FIRE ALARM CONTROL PANEL.
- REPLACE THE EXISTING OFF-SITE NOTIFICATION TRANSMITTER SYSTEM WITH A NEW RADIO MESH TRANSMITTER.
- NEW GAMEWELL-FCI E3 SERIES FIRE ALARM CONTROL PANEL TO REPLACE EXISTING FACP.
- NEW "LOC" LOCAL OPERATING CONSOLE TO REPLACE EXISTING REMOTE ANNUNCIATOR.

**FIRE ALARM MODERNIZATION**  
**FOOTHILL HIGH SCHOOL**  
**230 PALA AVE.**  
**SAN JOSE, CA 95127**

**OWNER:**  
East Side Union  
High School District  
830 North Capital Ave  
San Jose, CA 95133  
P: (408)347-5000  
F: (408)347-5045

**GENERAL CONTRACTOR:**  
Gonsalves & Stronck Const. Co., Inc.  
1000 Washington Street  
San Carlos, CA 94070-5319  
P:

**FIRE ALARM CONSULTANT:**  
INTREPID  
6300 San Ignacio Ave.  
San Jose, CA 95119-1213  
P: (510) 597-9966  
F: (510) 597-9980

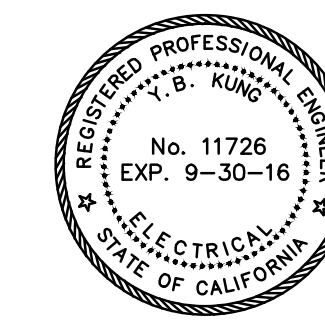
**ELECTRICAL CONTRACTOR:**  
Smith & Sons Electric, Inc.  
44081 South Grimmer Blvd.  
Fremont, CA 94538-6382  
P: (510) 651-4994

Job No.:	16021
Drawn By:	AP
Date:	05-23-2016
Eng. Approval:	DAVID KUNG
PM Approval:	DAVID KUNG
Scale:	AS SHOWN

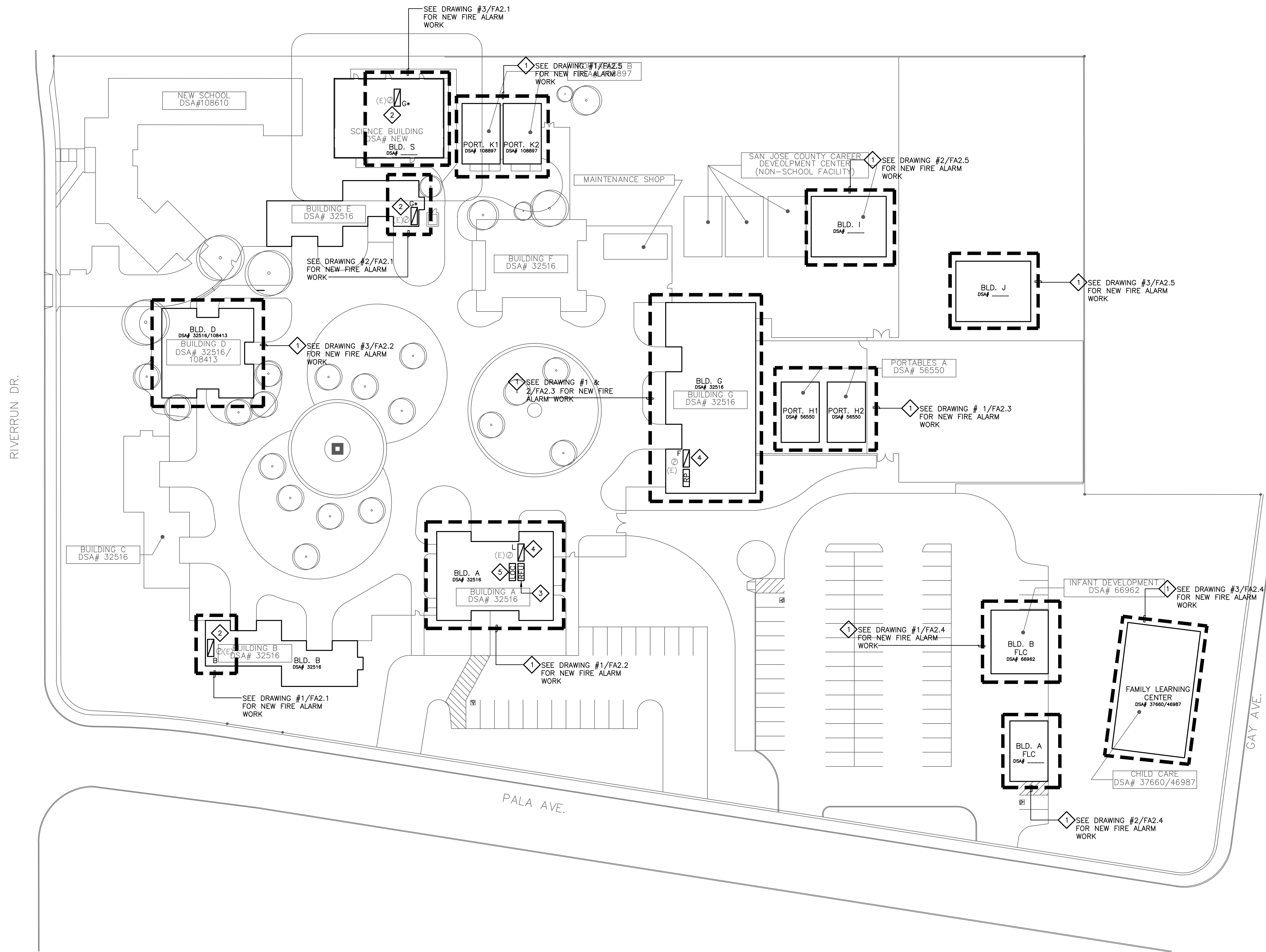
Sheet Title:  
**FIRE ALARM SITE PLAN**

Sheet No.:

**FA1.0**

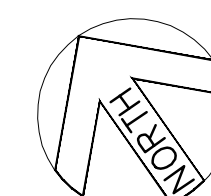


**ACKERMAN PRACTICON**  
CONSOLIDATED TECHNICAL SERVICES  
801 E. CHARLESTON ROAD  
PALO ALTO, CA 94303  
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A-P PROJECT NUMBER: 16021

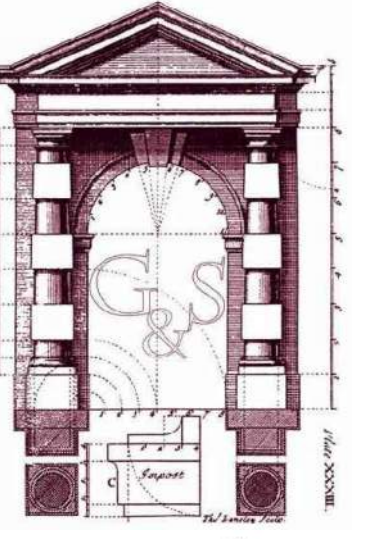


**1 FIRE ALARM SITE PLAN**

SCALE: 1"=30'-0"







Revision:	Date:
95% DD	9/14/16

**FIRE ALARM MODERNIZATION**  
**FOOTHILL HIGH SCHOOL**  
**230 PALA AVE.**  
**SAN JOSE, CA 95127**

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**GENERAL CONTRACTOR:**  
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1000 Washington Street  
San Carlos, CA 94070-5319  
P:

**FIRE ALARM CONSULTANT:**  
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6300 San Ignacio Ave.  
San Jose, CA 95119-1213  
P: (510) 597-9966  
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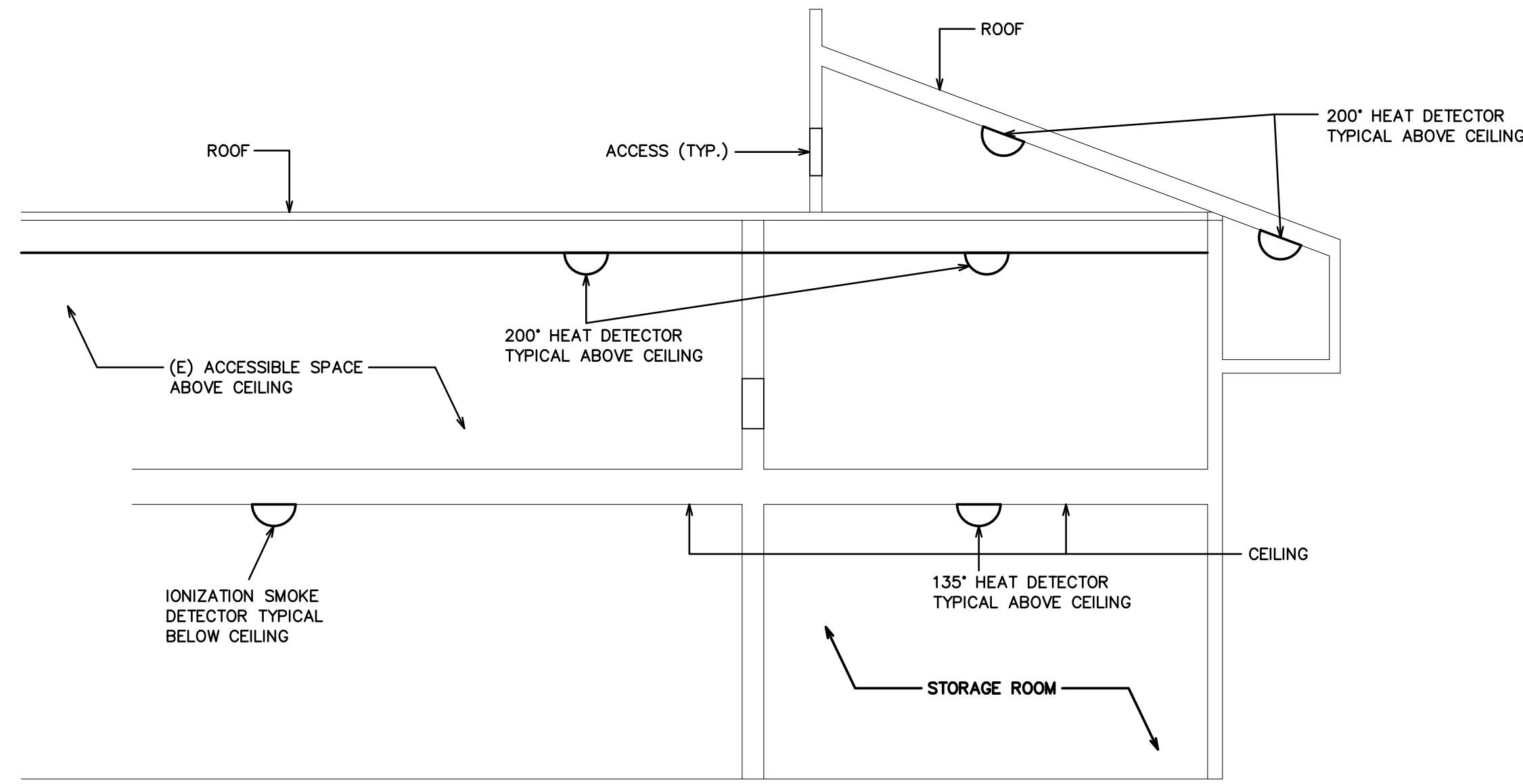
**ELECTRICAL CONTRACTOR:**  
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Job No.:	16021
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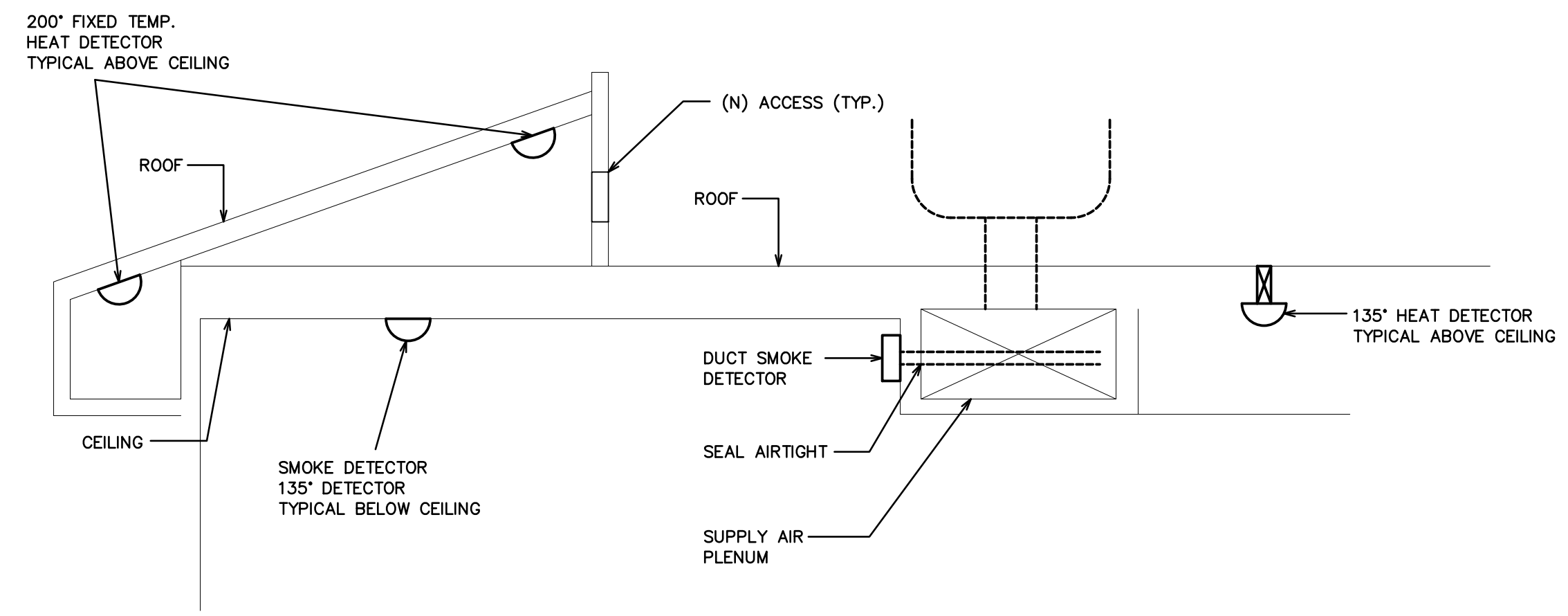
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BUILDING SECTION**

Sheet No.:

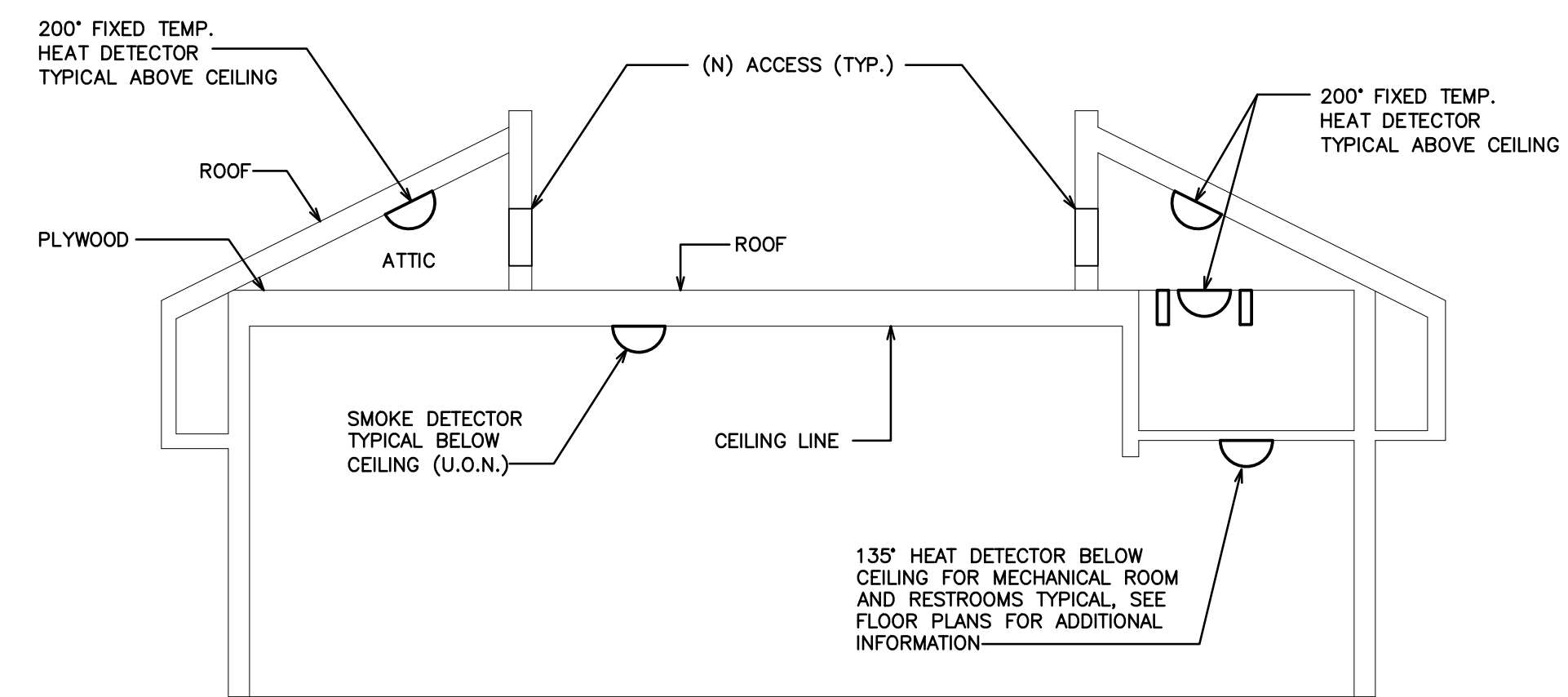
**FA0.11**



**3 FA BUILDING SECTION**  
NOT TO SCALE



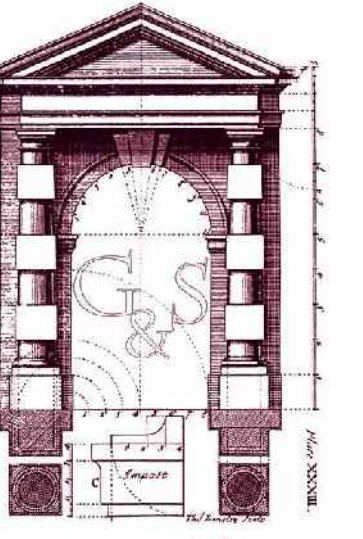
**1 FA BUILDING SECTION**  
NOT TO SCALE



**2 FA BUILDING SECTION**  
NOT TO SCALE



**ACKERMAN PRACTICON**  
CONSOLIDATED TECHNICAL SERVICES  
801 E. CHARLESTON ROAD  
PALO ALTO, CA 94303  
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A-P PROJECT NUMBER: 16021



Revision:	Date:
95% DD	9/14/16

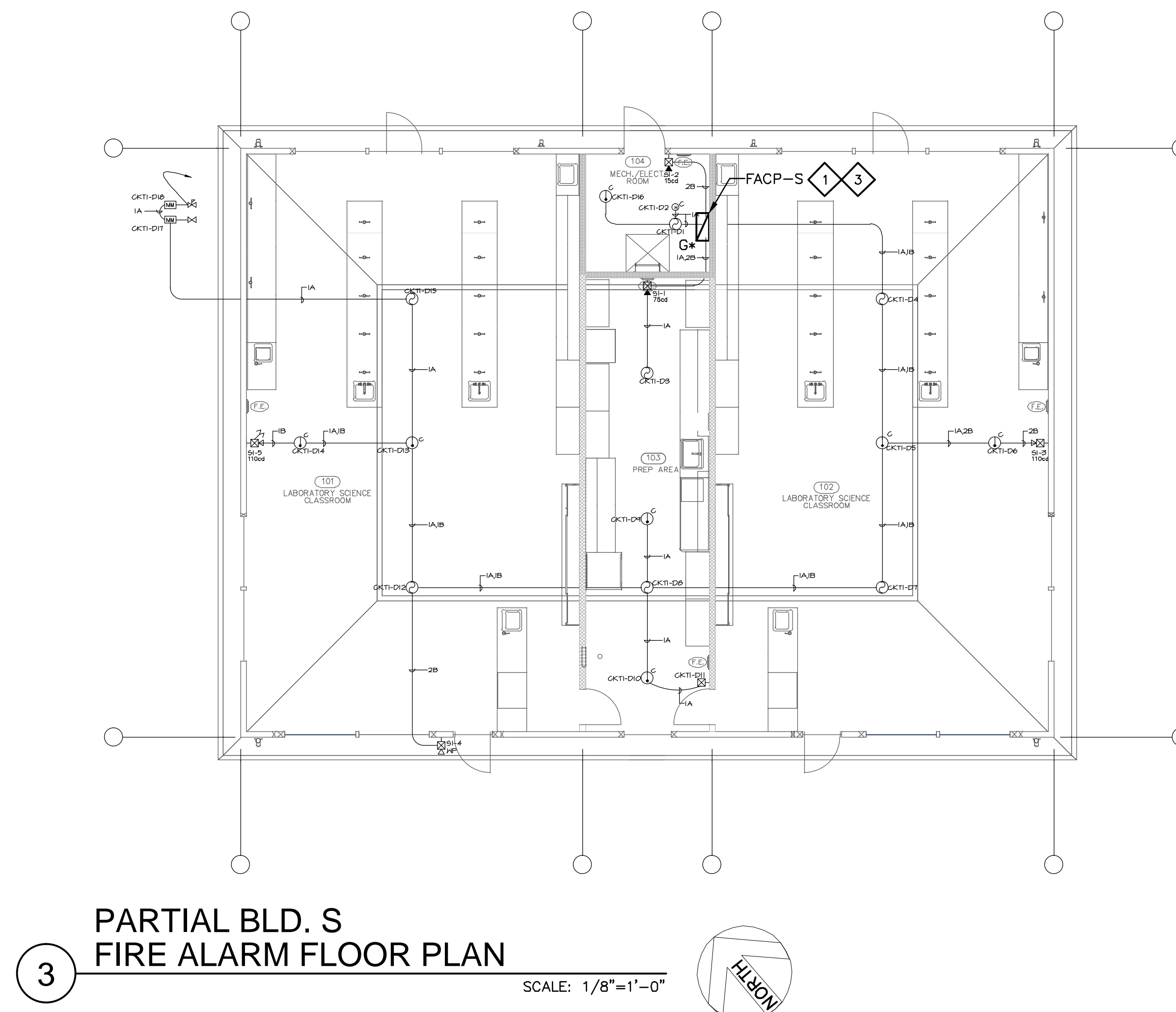
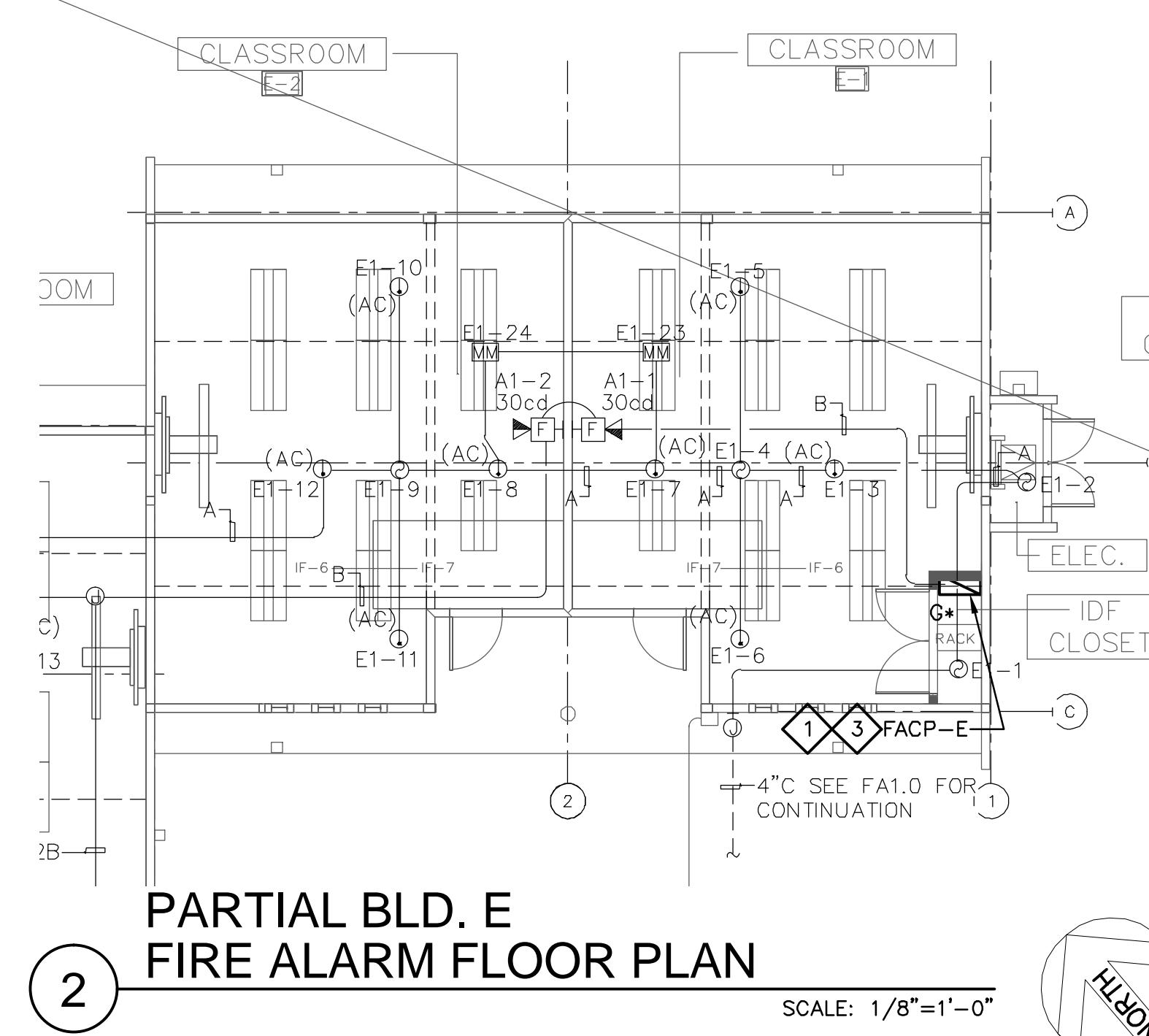
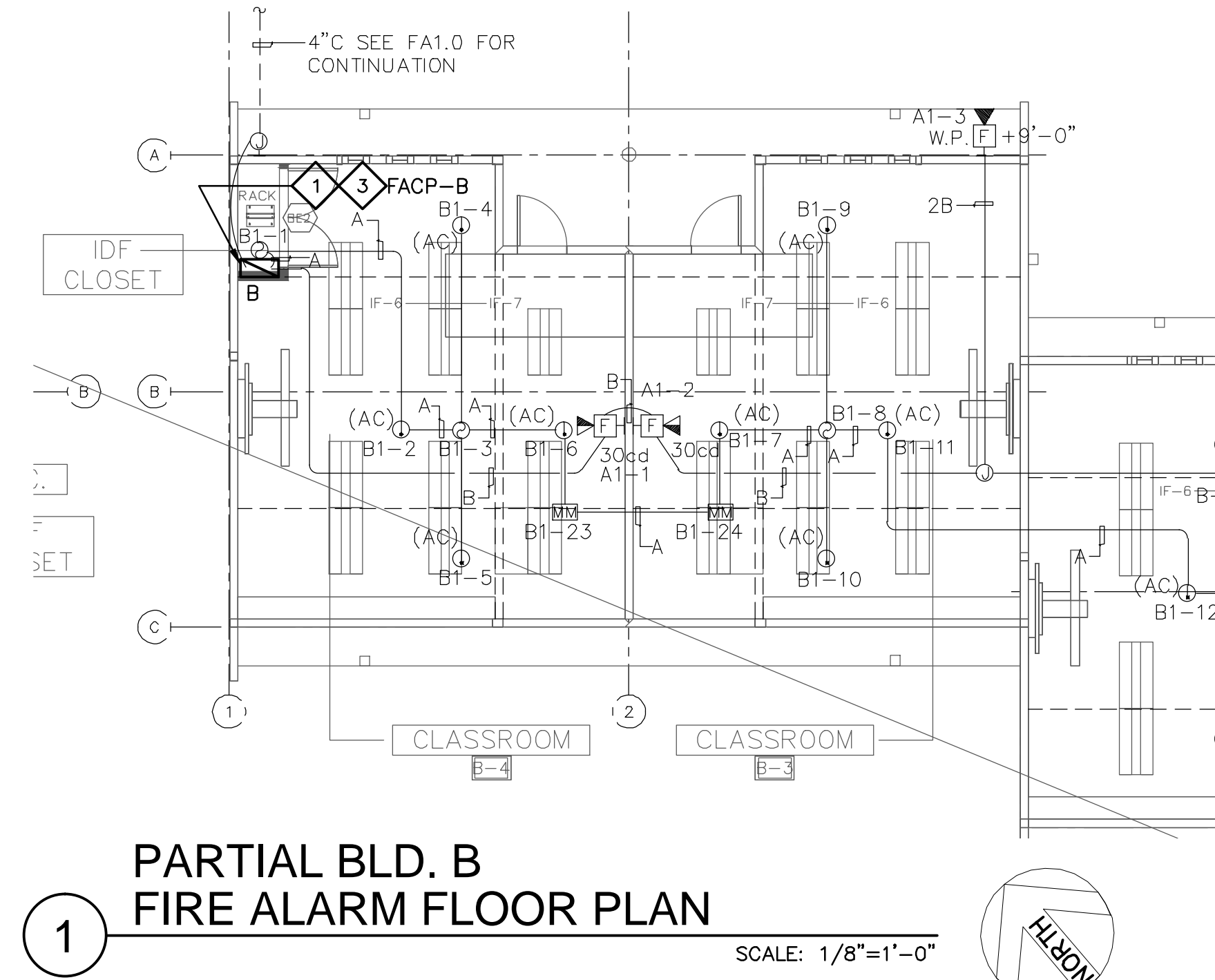
**FIRE ALARM MODERNIZATION**  
**FOOTHILL HIGH SCHOOL**  
230 PALA AVE.  
SAN JOSE, CA 95127

**GENERAL NOTES:**

1. LIGHT, THIN LINES INDICATE EXISTING; DARK, HEAVY LINES INDICATE NEW WORK.
2. SEE SHEET FA0.0 AND FA0.1 FOR GENERAL PROJECT INFORMATION.

**SHEET NOTES:**

1. EXISTING GAMEWELL-FCI 600XL SERIES FIRE ALARM CONTROL PANEL TO BE REPLACED AND RETROFITTED WITH NEW GAMEWELL-FCI E3 SERIES CONTROL UNIT COMPONENTS AND EQUIPMENT.
2. EXISTING GAMEWELL IF600 SERIES FIRE ALARM CONTROL PANEL TO BE RETROFITTED WITH NEW GAMEWELL-FCI E3 SERIES CONTROL UNIT COMPONENTS AND EQUIPMENT.
3. RECONNECT ALL EXISTING REMAINING REMOTE POWER SUPPLY, INITIATING DEVICES AND NOTIFICATION APPLIANCES IN EXISTING BUILDING TO NEW FACP.



**OWNER:**  
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**GENERAL CONTRACTOR:**  
Gonsalves & Stronck Const. Co., Inc.  
1000 Washington Street  
San Carlos, CA 94070-5319  
P:

**FIRE ALARM CONSULTANT:**  
INTREPID  
6300 San Ignacio Ave.  
San Jose, CA 95119-1213  
P: (510) 597-9966  
F: (510) 597-9980

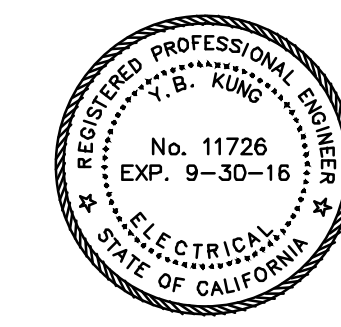
**ELECTRICAL CONTRACTOR:**  
Smith & Sons Electric, Inc.  
44081 South Grimmer Blvd.  
Fremont, CA 94538-6382  
P: (510) 651-4994

Job No.:	16021
Drawn By:	AP
Date:	05-23-2016
Eng. Approval:	DAVID KUNG
PM Approval:	DAVID KUNG
Scale:	AS SHOWN

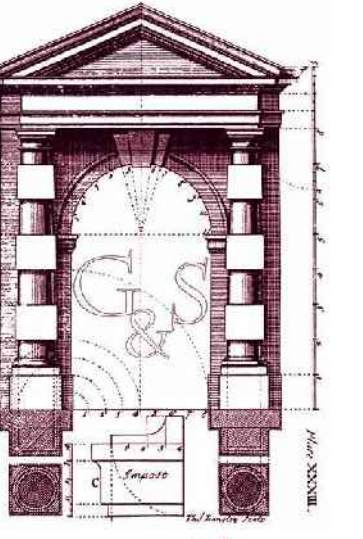
Sheet Title:  
**PARTIAL FIRE ALARM  
FLOOR PLANS  
BLD. B, E & S**

Sheet No.:

**FA2.1**



**ACKERMAN  
PRACTICON**  
CONSOLIDATED TECHNICAL SERVICES  
801 E. CHARLESTON ROAD  
PALO ALTO, CA 94303  
650 . 965 . 1000 FAX: 650 . 494 . 9312  
A-P PROJECT NUMBER: 16021



Revision:	Date:
95% DD	9/14/16

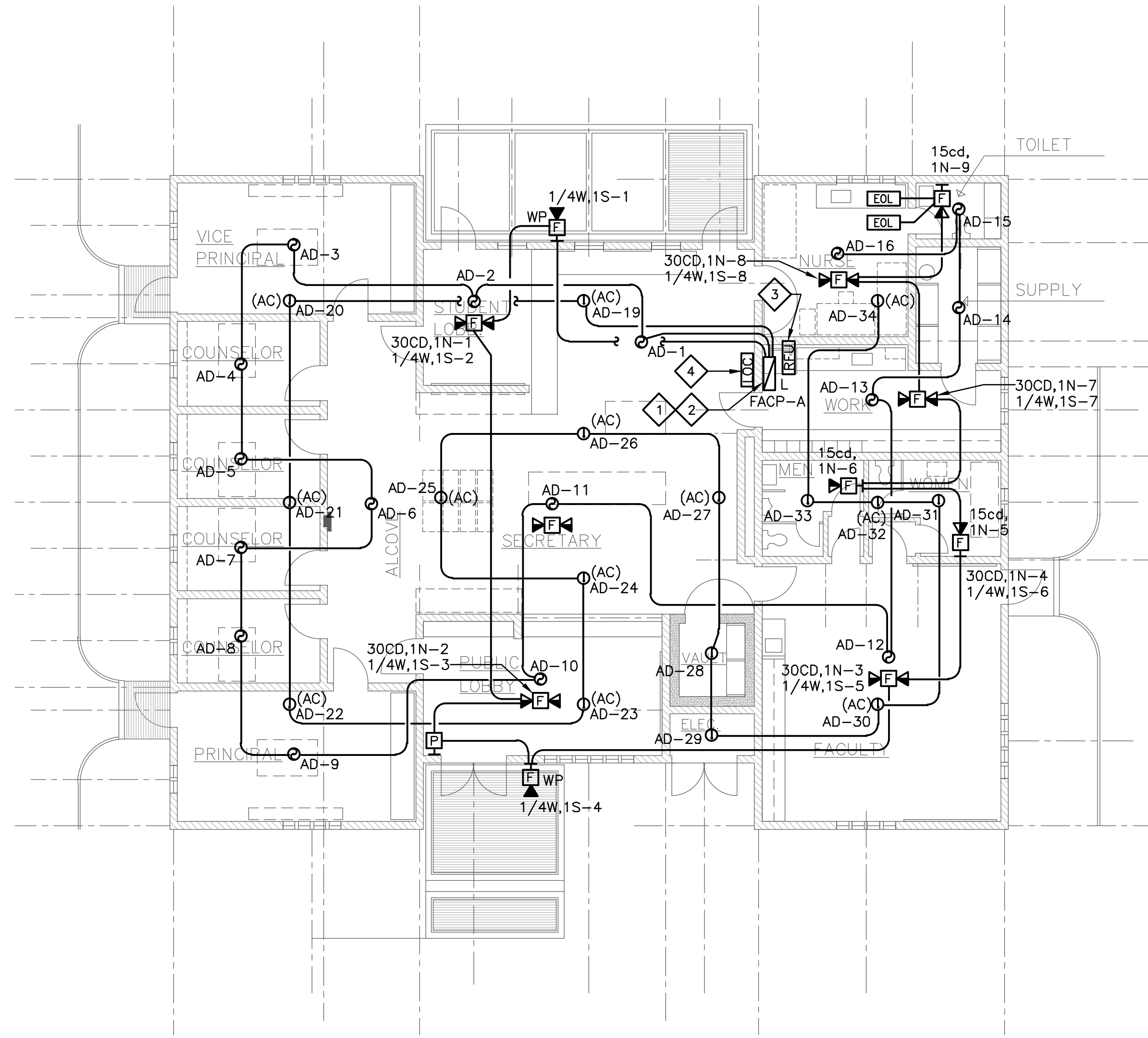
**FIRE ALARM MODERNIZATION  
FOOTHILL HIGH SCHOOL  
230 PALA AVE.  
SAN JOSE, CA 95127**

**GENERAL NOTES:**

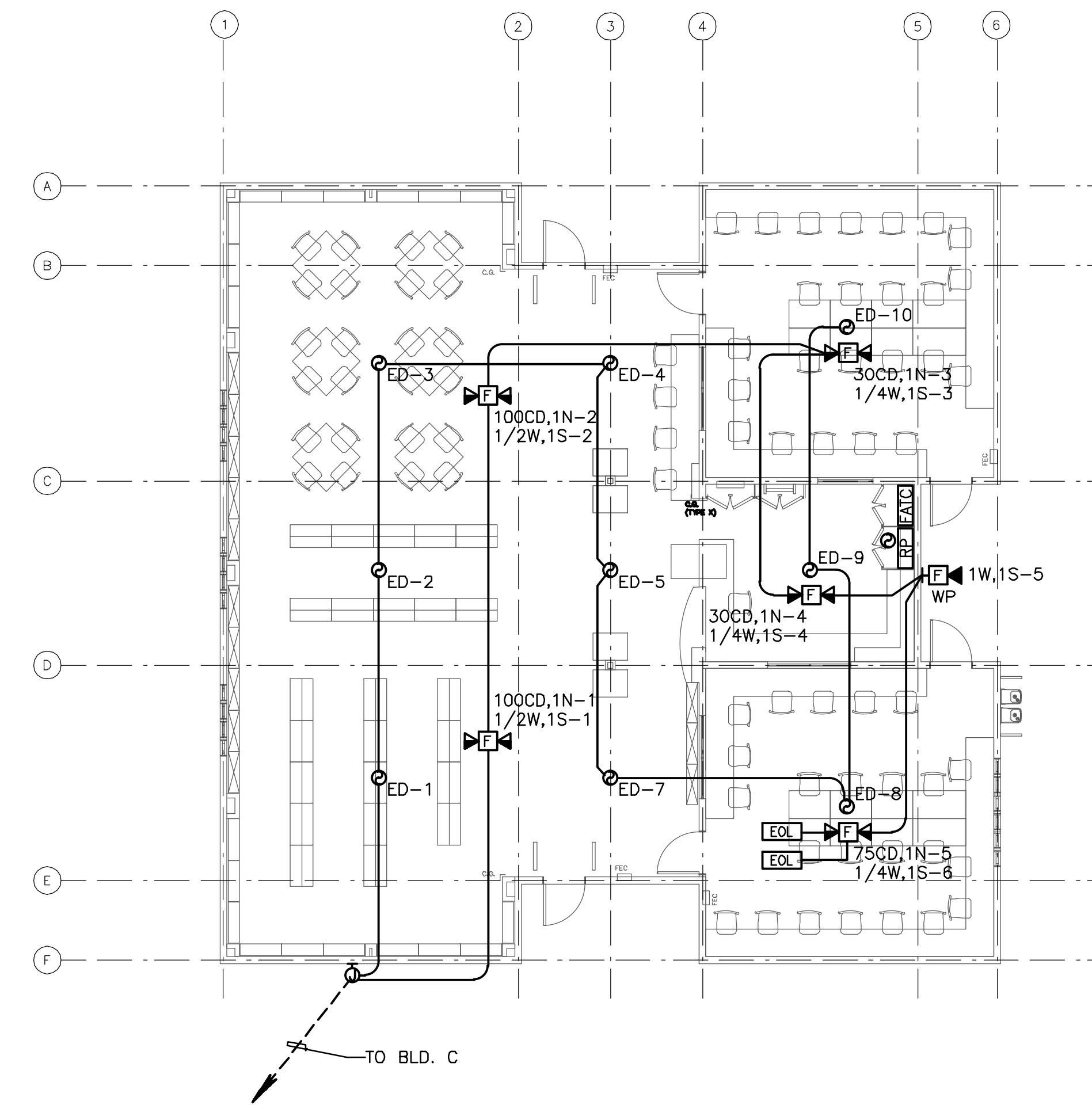
1. LIGHT, THIN LINES INDICATE EXISTING; DARK, HEAVY LINES INDICATE NEW WORK.
2. SEE SHEET FA0.0 AND FA0.1 FOR GENERAL PROJECT INFORMATION.

**SHEET NOTES:**

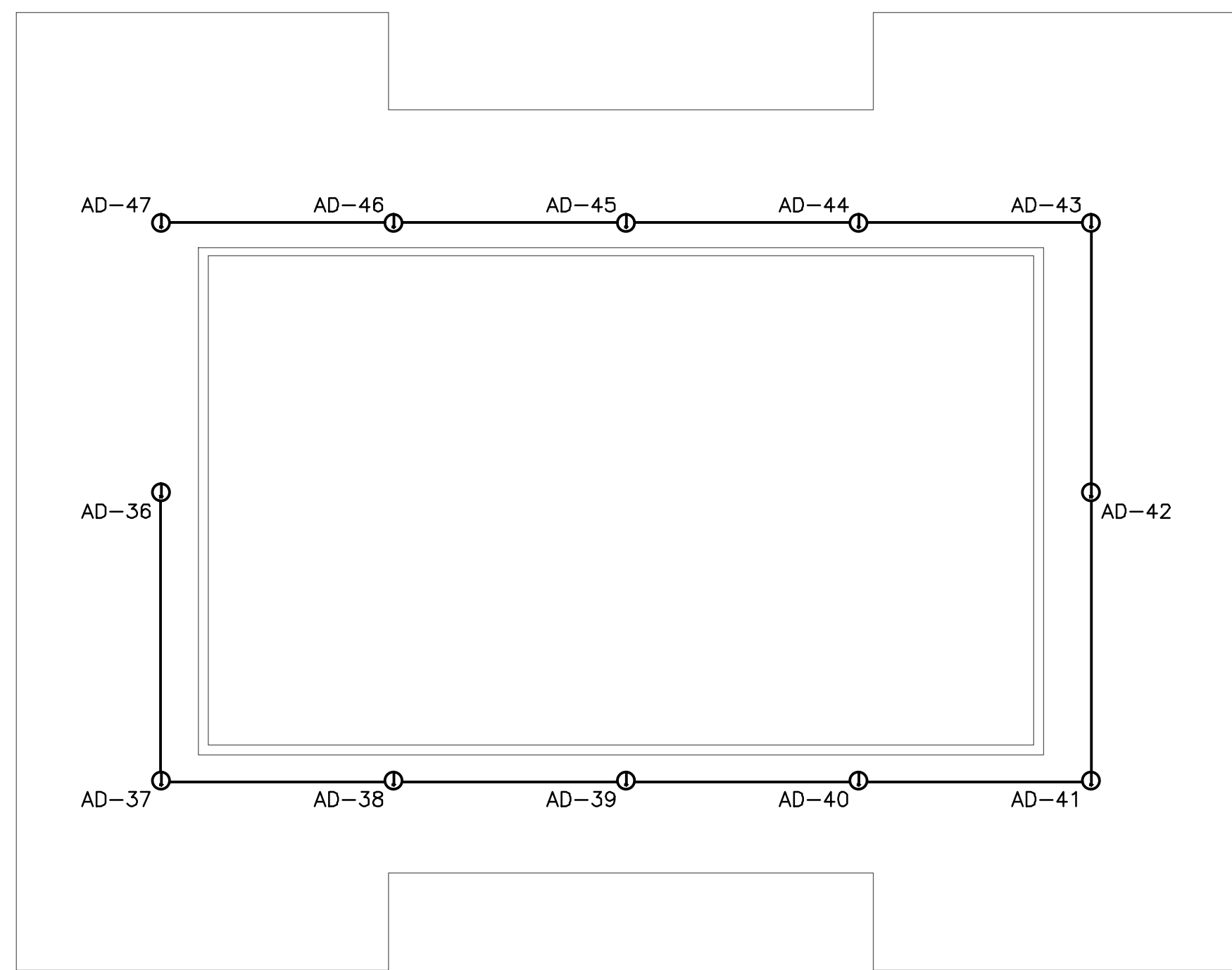
1. EXISTING GAMEWELL FIRE ALARM CONTROL PANEL TO BE REPLACED WITH NEW GAMEWELL-FCI E3 SERIES CONTROL PANEL.
2. RECONNECT ALL EXISTING REMAINING REMOTE POWER SUPPLY, INITIATING DEVICES AND CONNECT NEW NOTIFICATION APPLIANCES IN EXISTING BUILDING TO NEW FACP.
3. REPLACE THE EXISTING OFF-SITE NOTIFICATION TRANSMITTER SYSTEM WITH A NEW RADIO MESH TRANSMITTER.
4. NEW 'LOC' LOCAL OPERATING CONSOLE TO REPLACE EXISTING REMOTE ANNUNCIATOR.



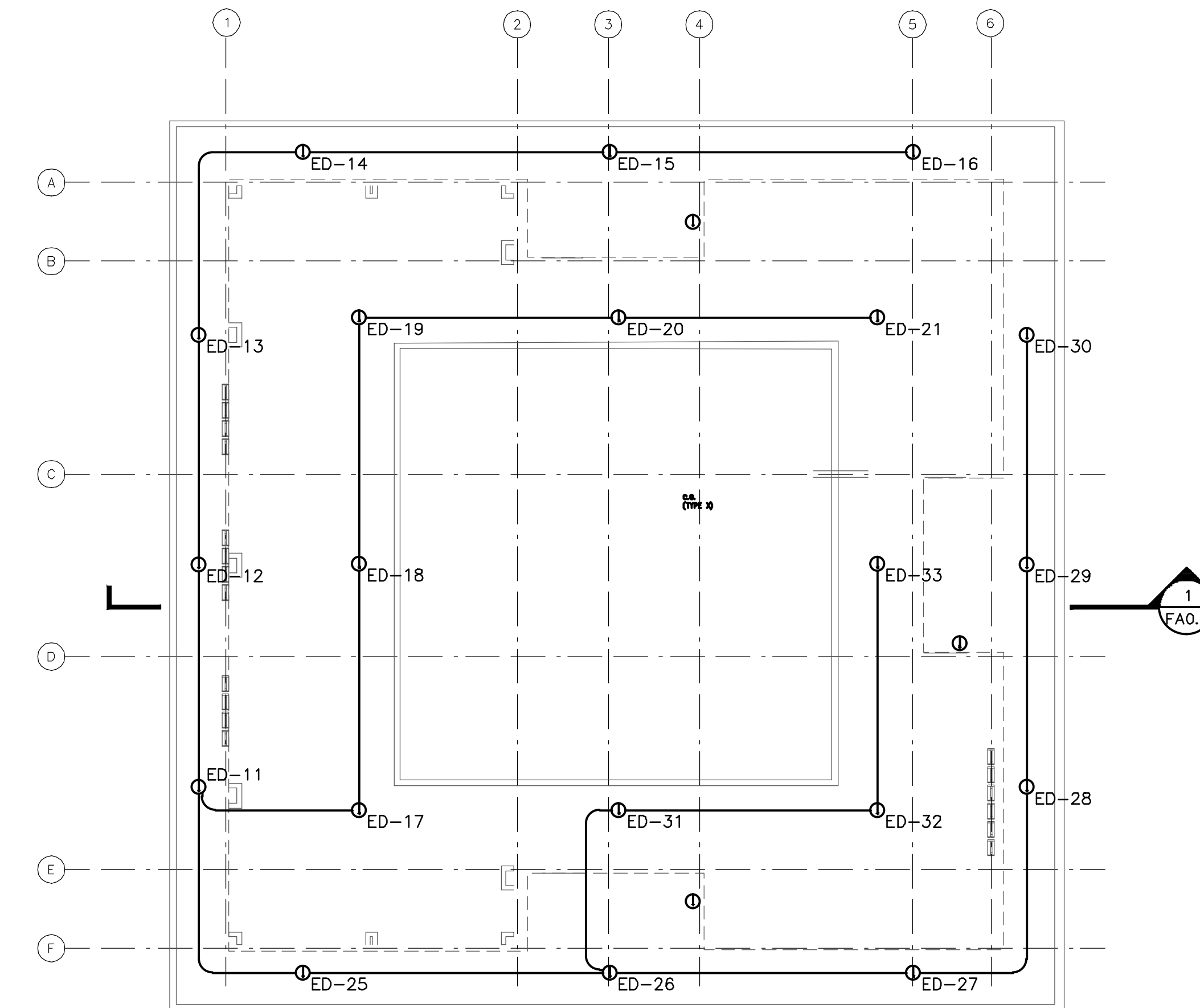
**1 BLD. A FIRE ALARM FLOOR PLAN**  
SCALE: 1/8"=1'-0"



**3 BLD. D FIRE ALARM FLOOR PLAN**  
SCALE: 1/8"=1'-0"



**2 BELOW ROOF BLD. A FIRE ALARM FLOOR PLAN**  
SCALE: 1/8"=1'-0"



**4 BELOW ROOF BLD. D FIRE ALARM FLOOR PLAN**  
SCALE: 1/8"=1'-0"

**OWNER:**  
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High School District  
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San Jose, CA 95133  
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F: (408)347-5045

**GENERAL CONTRACTOR:**  
Gonsalves & Stronck Const. Co., Inc.  
1000 Washington Street  
San Carlos, CA 94070-5319  
P:

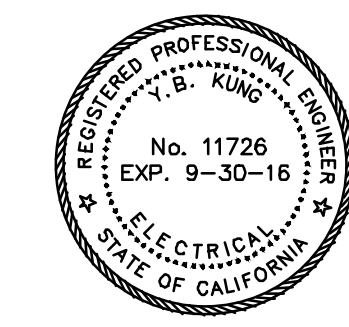
**FIRE ALARM CONSULTANT:**  
INTREPID  
6300 San Ignacio Ave.  
San Jose, CA 95119-1213  
P: (510) 597-9966  
F: (510) 597-9980

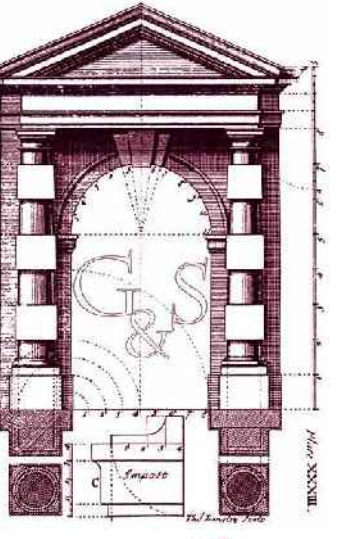
**ELECTRICAL CONTRACTOR:**  
Smith & Sons Electric, Inc.  
44081 South Grimmer Blvd.  
Fremont, CA 94538-6382  
P: (510) 651-4994

Job No.:	16021
Drawn By:	AP
Date:	05-23-2016
Eng. Approval:	DAVID KUNG
PM Approval:	DAVID KUNG
Scale:	AS SHOWN

Sheet Title:  
**FIRE ALARM FLOOR PLANS BLD. A & D**

Sheet No.:





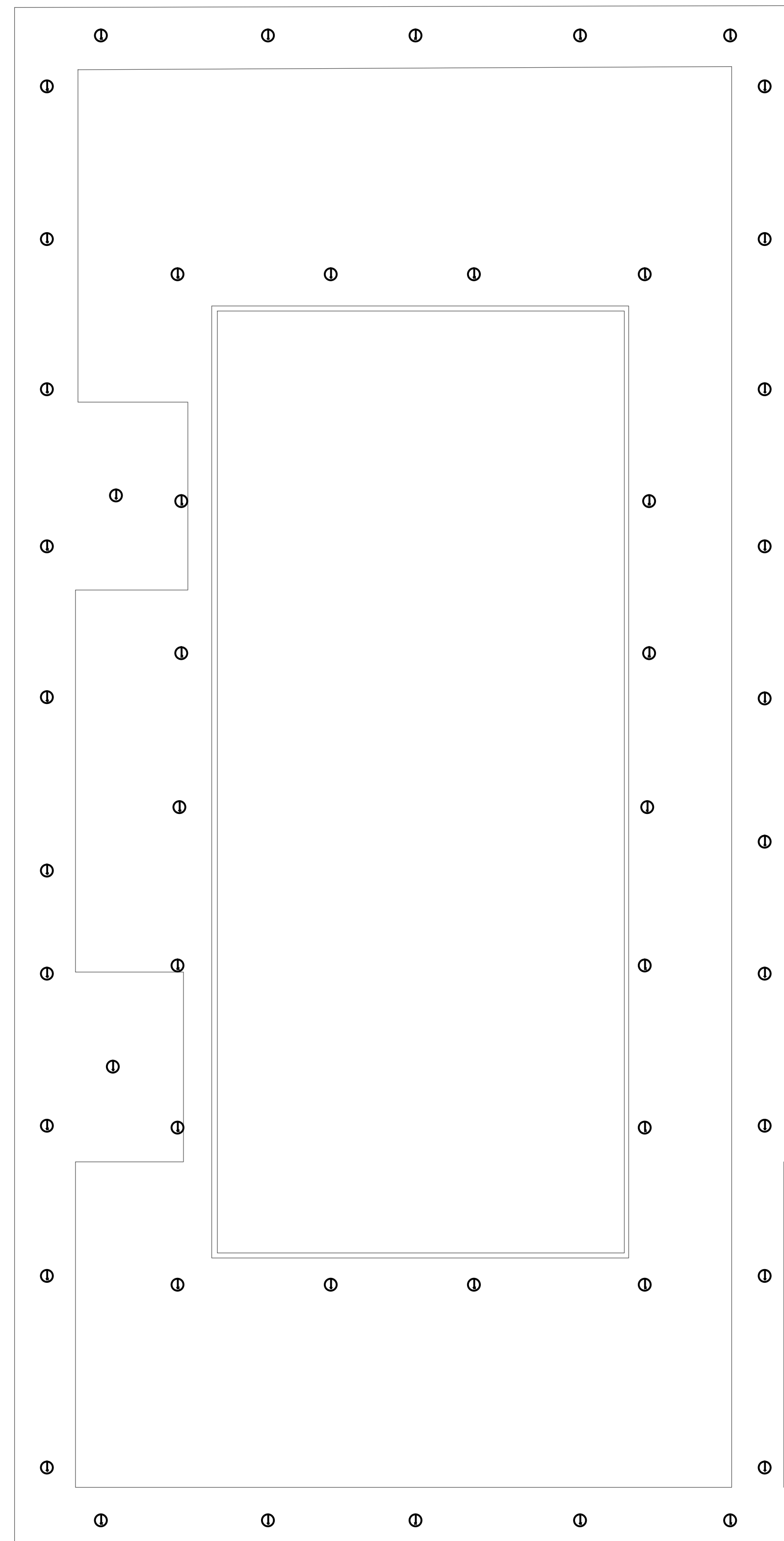
Revision:	Date:
95% DD	9/14/16

**GENERAL NOTES:**

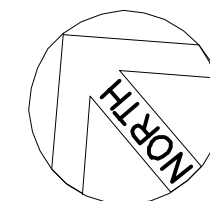
1. LIGHT, THIN LINES INDICATE EXISTING; DARK, HEAVY LINES INDICATE NEW WORK.
2. SEE SHEET FA0.0 AND FA0.1 FOR GENERAL PROJECT INFORMATION.

**SHEET NOTES:**

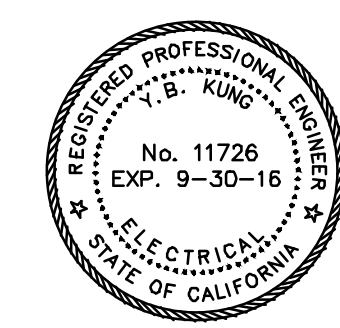
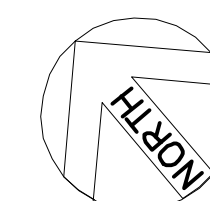
1. EXISTING GAMEWELL-FCI 600XL SERIES FIRE ALARM CONTROL PANEL TO BE REPLACED AND RETROFITTED WITH NEW GAMEWELL-FCI E3 SERIES CONTROL UNIT COMPONENTS AND EQUIPMENT.
2. EXISTING GAMEWELL IF600 SERIES FIRE ALARM CONTROL PANEL TO BE RETROFITTED WITH NEW GAMEWELL-FCI E3 SERIES CONTROL UNIT COMPONENTS AND EQUIPMENT.
3. RECONNECT ALL EXISTING REMAINING REMOTE POWER SUPPLY, INITIATING DEVICES AND NOTIFICATION APPLIANCES IN EXISTING BUILDING TO NEW FACP.



**2** BELOW ROOF  
BLD. G FIRE ALARM FLOOR PLAN  
SCALE: 1/8"=1'-0"



**1** BLD. G, H1 & H2 FIRE ALARM FLOOR PLAN  
SCALE: 1/8"=1'-0"



**ACKERMAN PRACTICON**  
CONSOLIDATED TECHNICAL SERVICES  
801 E. CHARLESTON ROAD  
PALO ALTO, CA 94303  
650 . 965 . 1000 FAX: 650 . 494 . 9312  
A-P PROJECT NUMBER: 16021

**FIRE ALARM MODERNIZATION**  
**FOOTHILL HIGH SCHOOL**  
230 PALA AVE.  
SAN JOSE, CA 95127

**OWNER:**  
East Side Union  
High School District  
830 North Capitol Ave  
San Jose, CA 95133  
P: (408)347-5000  
F: (408)347-5045

**GENERAL CONTRACTOR:**  
Gonsalves & Stronck Const. Co., Inc.  
1000 Washington Street  
San Carlos, CA 94070-5319  
P:

**FIRE ALARM CONSULTANT:**  
INTREPID  
6300 San Ignacio Ave.  
San Jose, CA 95119-1213  
P: (510) 597-9966  
F: (510) 597-9980

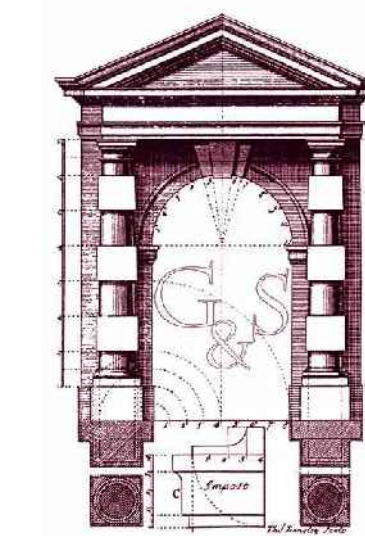
**ELECTRICAL CONTRACTOR:**  
Smith & Sons Electric, Inc.  
44081 South Grimmer Blvd.  
Fremont, CA 94538-6382  
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Job No.:	16021
Drawn By:	AP
Date:	05-23-2016
Eng. Approval:	DAVID KUNG
PM Approval:	DAVID KUNG
Scale:	AS SHOWN

Sheet Title:  
**FIRE ALARM  
FLOOR PLANS  
BLD. G, H1 & H2**

Sheet No.:

**FA2.3**



Revision:	Date:
95% DD	9/14/16

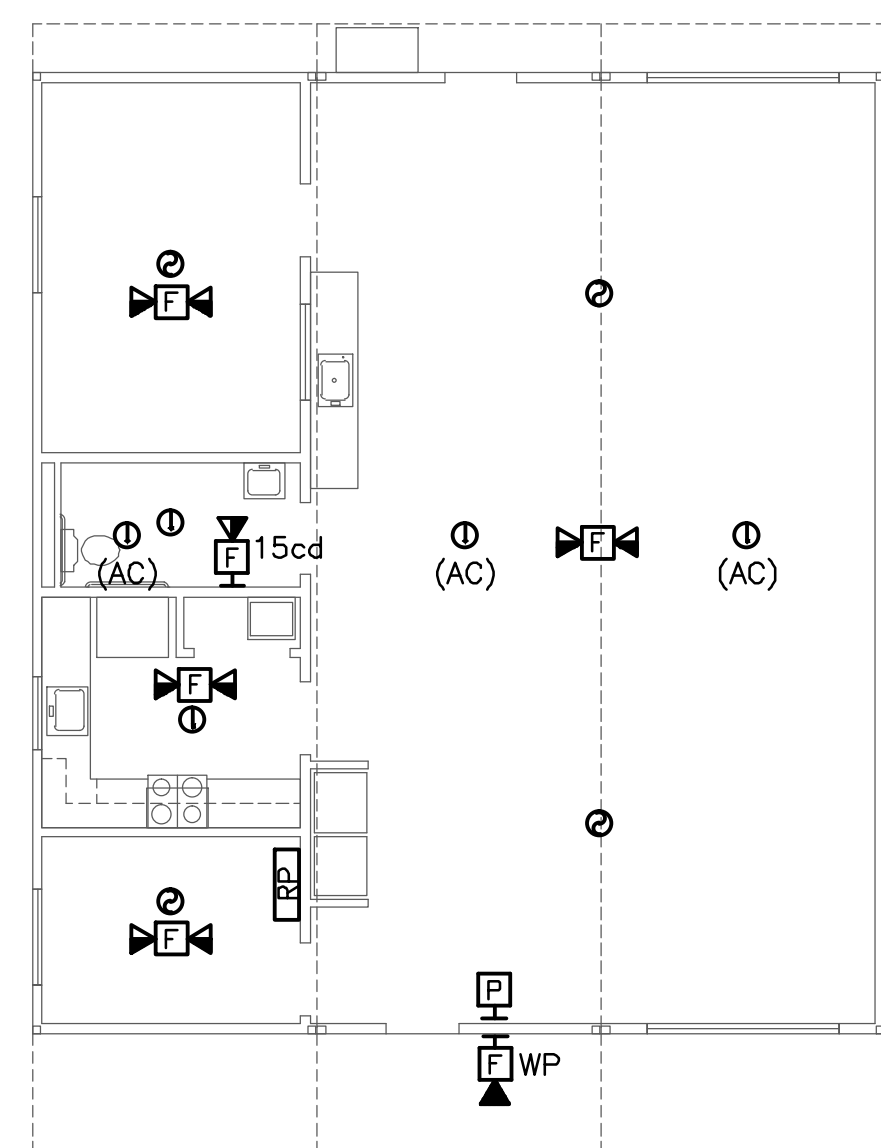
**FIRE ALARM MODERNIZATION**  
**FOOTHILL HIGH SCHOOL**  
230 PALA AVE.  
SAN JOSE, CA 95127

**GENERAL NOTES:**

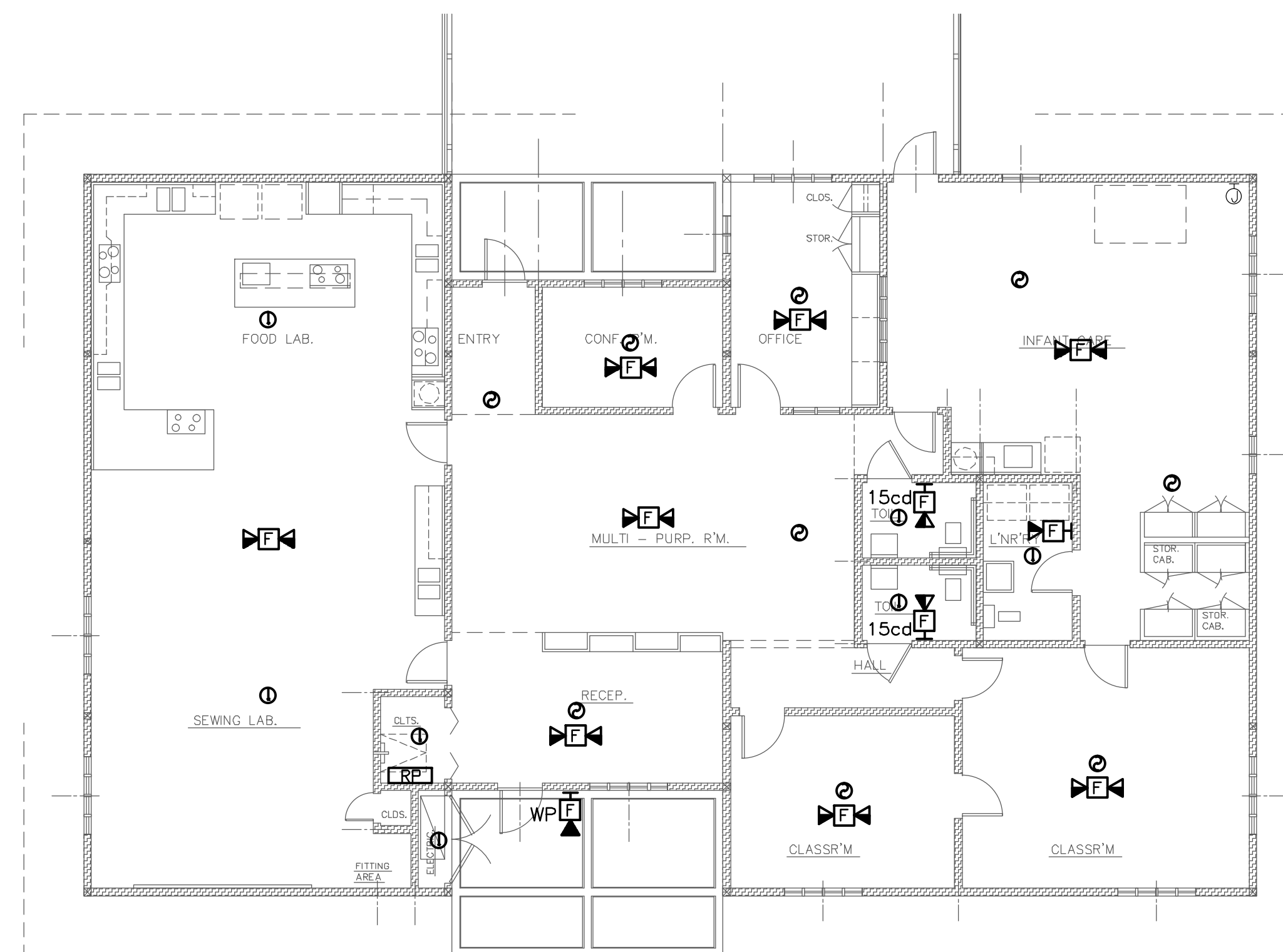
1. LIGHT, THIN LINES INDICATE EXISTING. DARK, HEAVY LINES INDICATE NEW WORK.
2. SEE SHEET FA0.0 AND FA0.1 FOR GENERAL PROJECT INFORMATION.

**SHEET NOTES:**

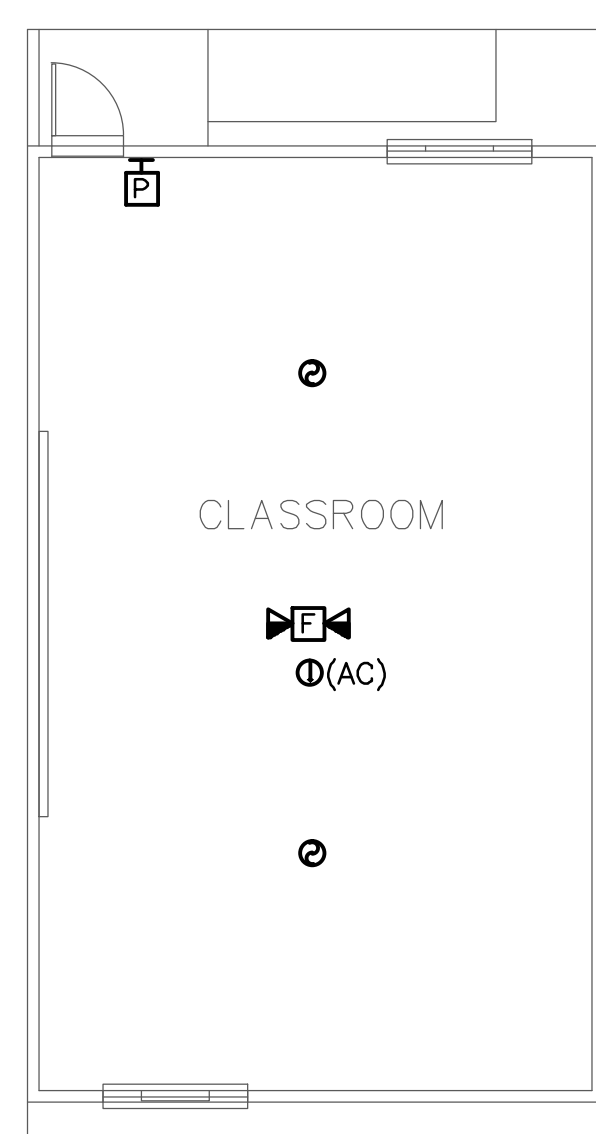
1. EXISTING GAMEWELL-FCI 600XL SERIES FIRE ALARM CONTROL PANEL TO BE REPLACED AND RETROFITTED WITH NEW GAMEWELL-FCI E3 SERIES CONTROL UNIT COMPONENTS AND EQUIPMENT.
2. EXISTING GAMEWELL IF600 SERIES FIRE ALARM CONTROL PANEL TO BE RETROFITTED WITH NEW GAMEWELL-FCI E3 SERIES CONTROL UNIT COMPONENTS AND EQUIPMENT.
3. RECONNECT ALL EXISTING REMAINING REMOTE POWER SUPPLY, INITIATING DEVICES AND NOTIFICATION APPLIANCES IN EXISTING BUILDING TO NEW FACP.



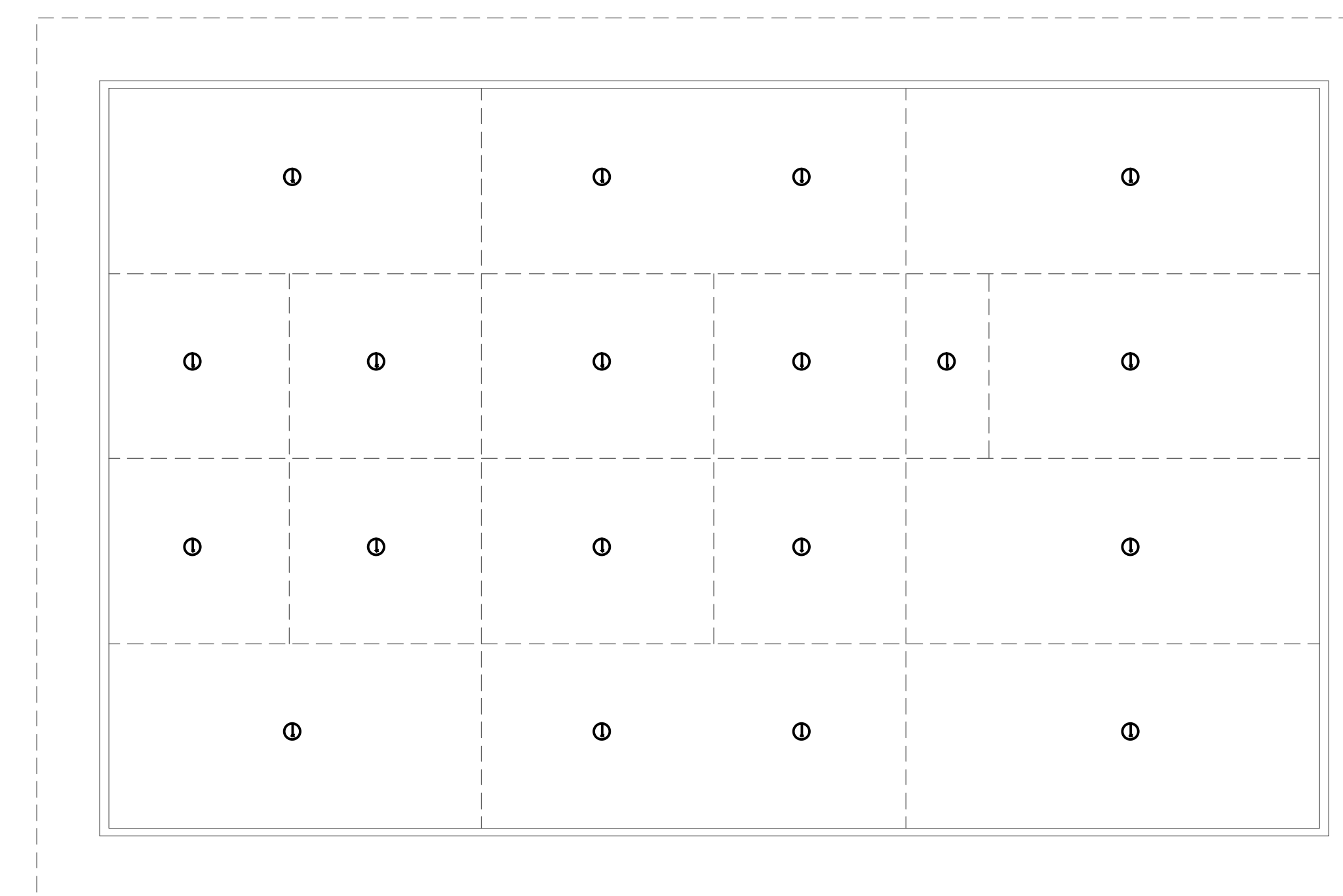
1 BLD. B FIRE ALARM FLOOR PLAN  
SCALE: 1/8"=1'-0"



3 FAMILY LEARNING CENTER FIRE ALARM FLOOR PLAN  
SCALE: 1/8"=1'-0"



2 BLD. A FIRE ALARM FLOOR PLAN  
SCALE: 1/8"=1'-0"



4 ABOVE CEILING FAMILY LEARNING CENTER FIRE ALARM FLOOR PLAN  
SCALE: 1/8"=1'-0"

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P:

**FIRE ALARM CONSULTANT:**  
INTREPID  
6300 San Ignacio Ave.  
San Jose, CA 95119-1213  
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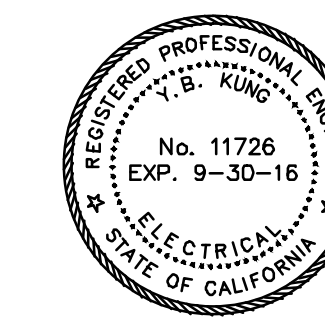
**ELECTRICAL CONTRACTOR:**  
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Job No.:	16021
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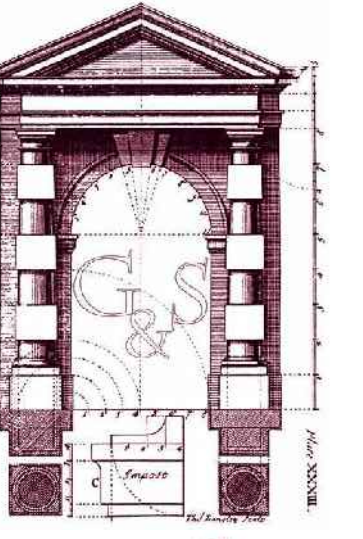
Sheet Title:  
**FIRE ALARM FLOOR PLANS**  
**BLD. A, B & FAMILY CTR**

Sheet No.:

**FA2.4**



**ACKERMAN PRACTICON**  
CONSOLIDATED TECHNICAL SERVICES  
801 E. CHARLESTON ROAD  
PALO ALTO, CA 94303  
650 . 965 . 1000 FAX: 650 . 494 . 9312  
A-P PROJECT NUMBER: 16021



Revision:	Date:
95% DD	9/14/16

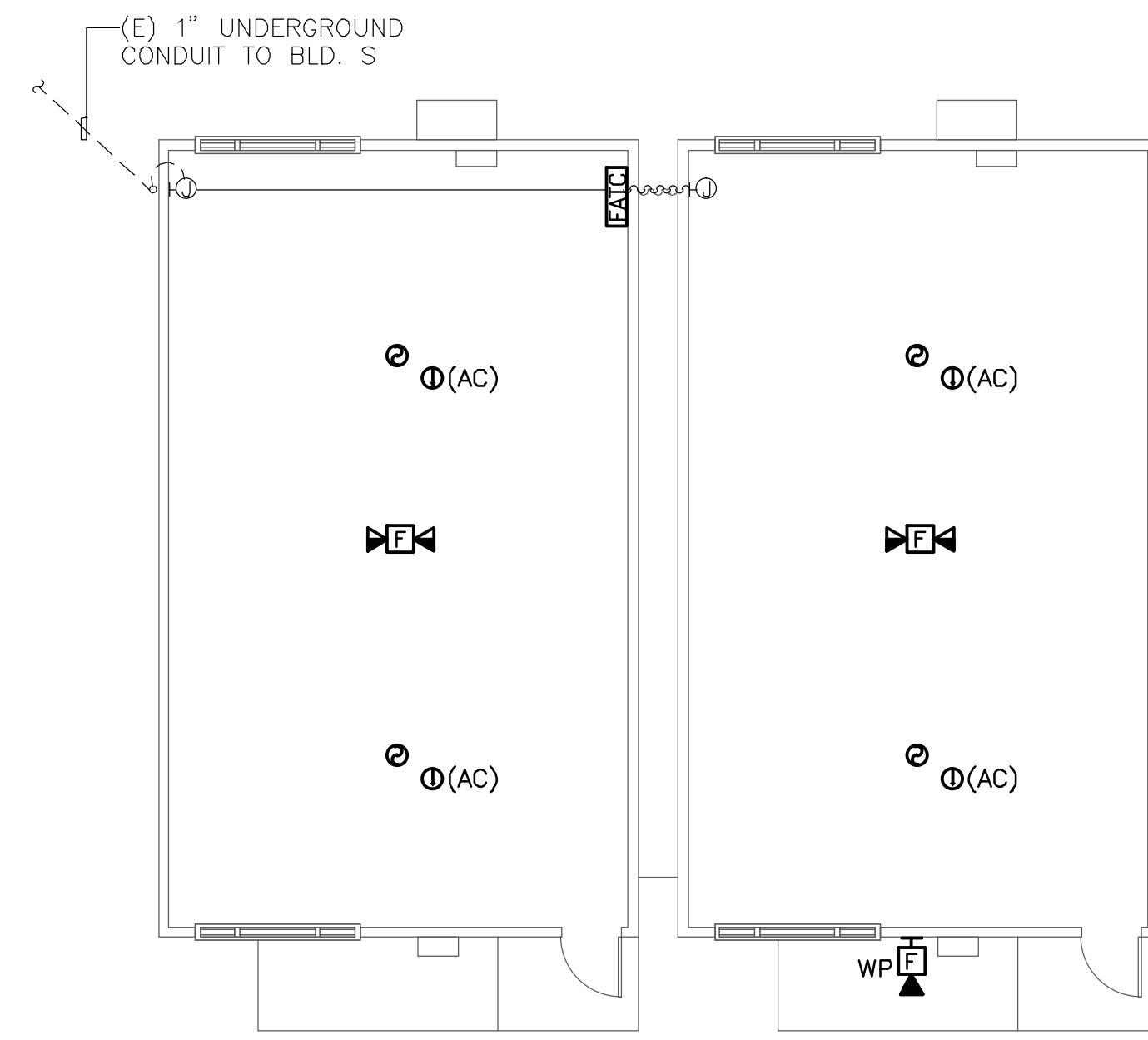
**FIRE ALARM MODERNIZATION**  
**FOOTHILL HIGH SCHOOL**  
230 PALA AVE.  
SAN JOSE, CA 95127

**GENERAL NOTES:**

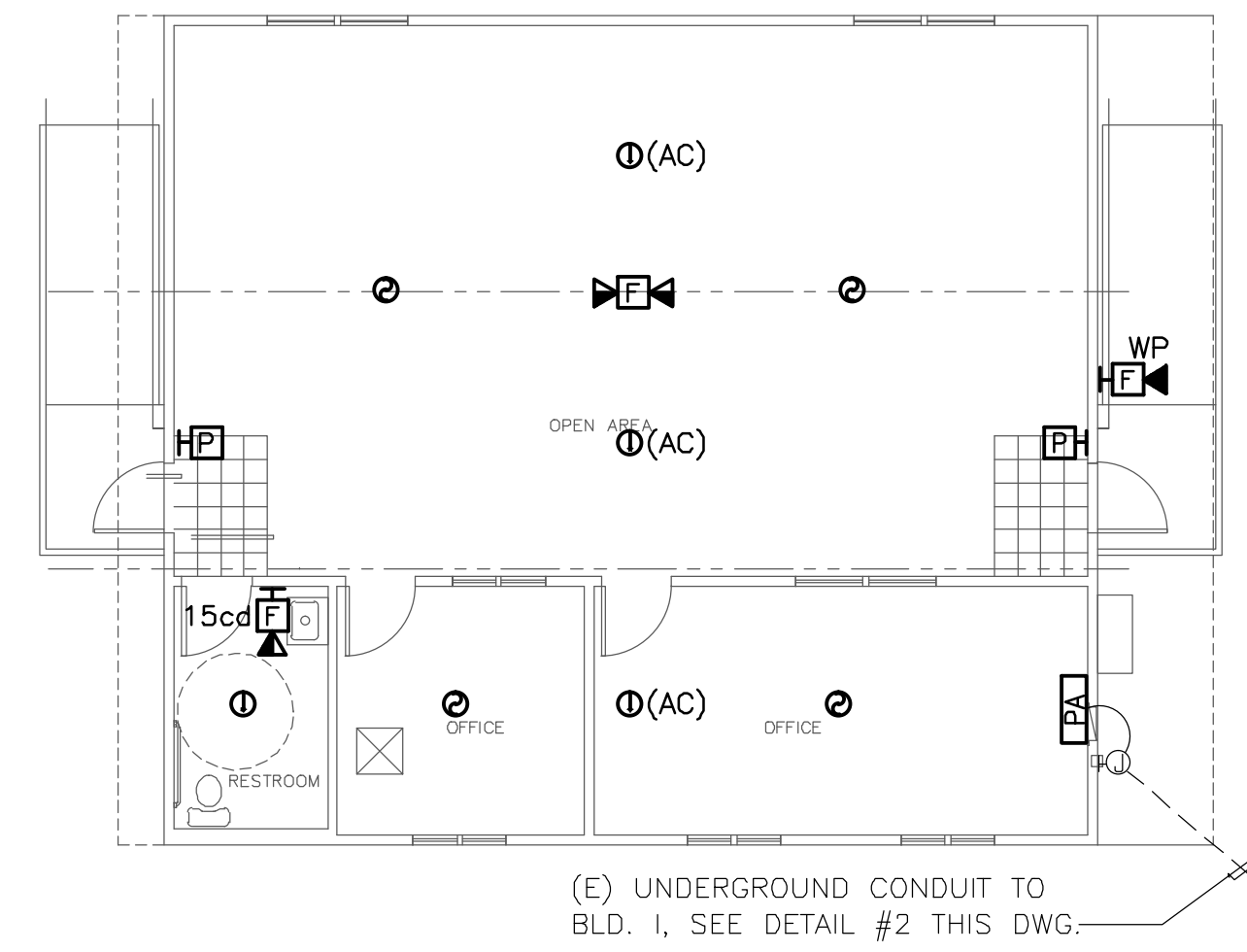
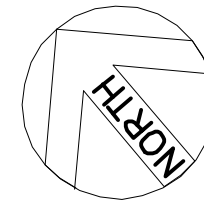
1. LIGHT, THIN LINES INDICATE EXISTING. DARK, HEAVY LINES INDICATE NEW WORK.
2. SEE SHEET FA0.0 AND FA0.1 FOR GENERAL PROJECT INFORMATION.

**SHEET NOTES:**

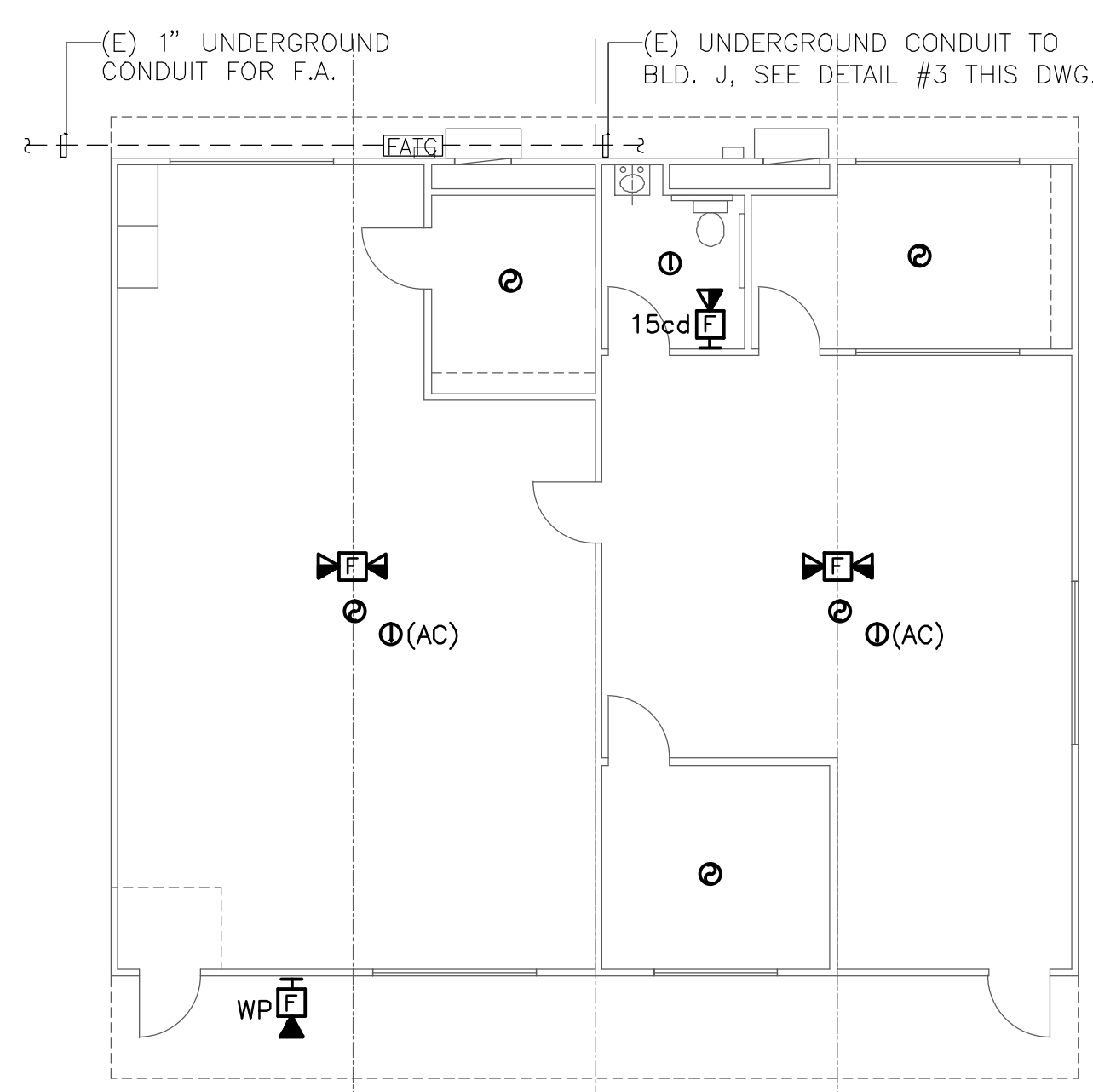
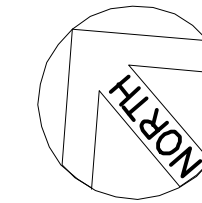
1. EXISTING GAMEWELL-FCI 600XL SERIES FIRE ALARM CONTROL PANEL TO BE REPLACED AND RETROFITTED WITH NEW GAMEWELL-FCI E3 SERIES CONTROL UNIT COMPONENTS AND EQUIPMENT.
2. EXISTING GAMEWELL IF600 SERIES FIRE ALARM CONTROL PANEL TO BE RETROFITTED WITH NEW GAMEWELL-FCI E3 SERIES CONTROL UNIT COMPONENTS AND EQUIPMENT.
3. RECONNECT ALL EXISTING REMAINING REMOTE POWER SUPPLY, INITIATING DEVICES AND NOTIFICATION APPLIANCES IN EXISTING BUILDING TO NEW FACP.



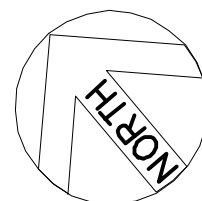
1 PORT. K1 & K2 FIRE ALARM FLOOR PLAN  
SCALE: 1/8"=1'-0"



3 BLD. J FIRE ALARM FLOOR PLAN  
SCALE: 1/8"=1'-0"



2 BLD. I FIRE ALARM FLOOR PLAN  
SCALE: 1/8"=1'-0"



**OWNER:**  
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High School District  
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**GENERAL CONTRACTOR:**  
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San Carlos, CA 94070-5319  
P:

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P: (510) 597-9966  
F: (510) 597-9980

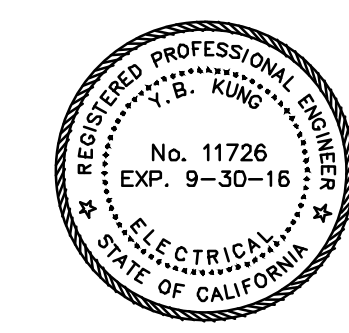
**ELECTRICAL CONTRACTOR:**  
Smith & Sons Electric, Inc.  
44081 South Grimmer Blvd.  
Fremont, CA 94538-6382  
P: (510) 651-4994

Job No.:	16021
Drawn By:	AP
Date:	05-23-2016
Eng. Approval:	DAVID KUNG
PM Approval:	DAVID KUNG
Scale:	AS SHOWN

Sheet Title:  
**FIRE ALARM**  
**FLOOR PLANS**  
**BLD. I, J, K1 & K2**

Sheet No.:

**FA2.5**



**ACKERMAN**  
**PRACTICON**  
CONSOLIDATED TECHNICAL SERVICES  
801 E. CHARLESTON ROAD  
PALO ALTO, CA 94303  
650 . 965 . 1000 FAX: 650 . 494 . 9312  
A-P PROJECT NUMBER: 16021



# Gamewell Retrofit Kits

by Honeywell

## Description

The Gamewell Retrofit Kits offered by Gamewell-FCI provide a simple way to convert the following existing Gamewell legacy Systems to a new E3 Series<sup>®</sup> fire alarm panel.

- IF602 panel
- IF610 panel
- IF632 panel

The Retrofit Kits offer a cost-effective solution to change the Gamewell legacy panels without replacing the existing Gamewell backbox. This solution eliminates the expensive cost of repairing walls, buying new cabinets or replacing the existing Gamewell backbox.

All retrofit kits provide backplates that mount directly into the Gamewell backboxes. Each backplate includes mounting patterns to allow an easy installation of the E3 Series plates and sub-assemblies. The front panel displays can be retrofitted to the E3 Series LCD-E3/LCD-SLP using a simple mounting plate. IF600XL retrofit kits include a 3-bay slot door for addressable switch buttons, LED drivers, and a paging microphone.

Gamewell RAN annunciator can also be retrofitted to accommodate an E3 Series supported annunciator by reusing the existing backbox.

Retrofitting is a cost effective way to upgrade your facilities' fire alarm control panel without swapping out smoke detectors and notification devices. Changing your legacy Gamewell System to the Gamewell-FCI, E3 Series System converts your fire alarm system, so that it is compliant with the most current UL<sup>®</sup> and NFPA codes and standards.

## Installation

To retrofit from a Gamewell panel to an E3 Series System, refer to the following time-saving steps which can save a lot in setup and labor costs.

1. Remove all field wiring from the legacy Gamewell control boards that are installed inside the cabinet.
2. Remove the front door or inner doors.
3. Unscrew the Gamewell panel mounting plate from the backbox.
4. Install the new retrofit mounting plate for E3 Series sub-assemblies or plates.
5. Install the new E3 Series panels and connect with the existing wiring.
6. Auto configure the system or custom program the E3 Series.

E3 Series<sup>®</sup> is a registered trademark of Honeywell International Inc.  
UL<sup>®</sup> is a registered trademark of Underwriter's Laboratories Inc.

## Gamewell to E3 Series<sup>®</sup>



IF600XL

B-Slim

## Features

- Listed under UL<sup>®</sup> Standard 864, 9th edition.
- Cost effective solution for upgrading an existing system without buying a complete E3 Series System.
- Upgrades to the state-of-the-art E3 Series fire alarm control panels.
- Offers a simple plate system for easy installation.
- Allows the existing cabinet to remain mounted on the wall.
- Reuses the existing System Sensor or Apollo detectors/modules, and notification devices.
- Remote annunciator retrofit available.

## E3 Series Features

For additional information on the E3 Series features, refer to the E3 Series Data Sheet Part Number: 9020-0637.

SIGNALING



LISTED  
S1869



**GAMEWELL-FCI**

12 Clintonville Road, Northford, CT 06472-1610 USA • Tel: (203) 484-7161 • Fax: (203) 484-7118

Specifications are for information only, are not intended for installation purposes, and are subject to change without notice. No responsibility is assumed by Gamewell-FCI for their use.

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[www.gamewell-fci.com](http://www.gamewell-fci.com)

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## Gamewell RAN2 Retrofit

Figure 1.1 illustrates the Gamewell RAN2 retrofit.



Figure 1 Gamewell RAN-7100

## Retrofit Cabinet Installation

Figure 2 shows an IF600XL/632 configuration.

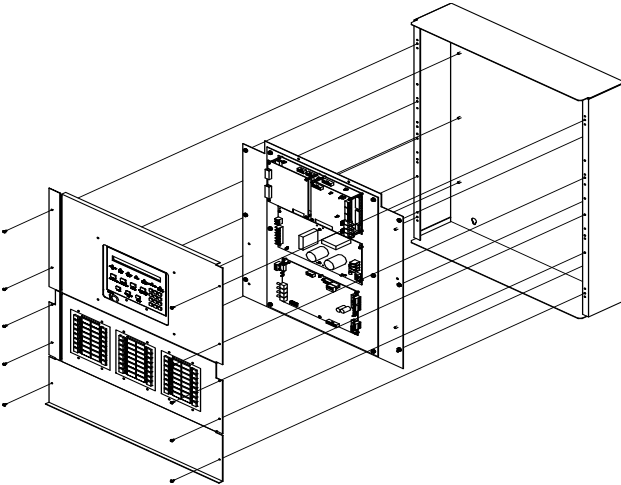


Figure 2 IF600XL/632

Figure 3 shows an IF600 configuration.

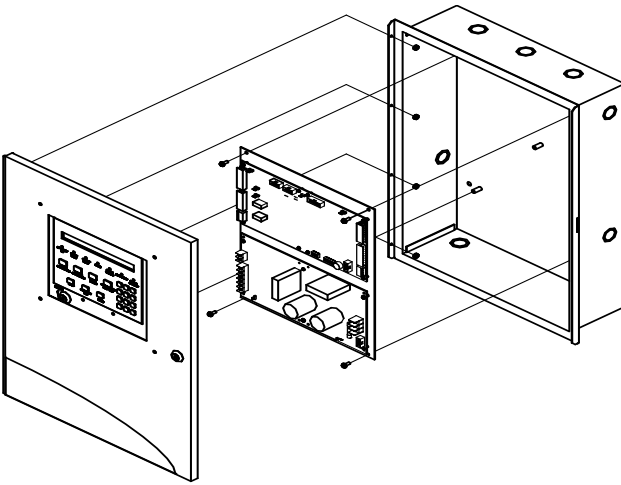


Figure 3 IF600

## Ordering Information

Part Number	Description
<b>IF600-RETROFIT</b>	Gamewell IF602/IF610 (System Sensor or Apollo Retrofit)

The Retrofit Kit includes the following:

- Front door
- Backbox mounting plate
- Display plate

### Loop Cards

The IF600 Retrofit Kit supports up to two ILI loop cards:

- ILI-MB-E3
- ILI95-MB-E3
- ILI-S-E3
- ILI95-S-E3

The following E3 Series sub-assemblies can be used in the IF600 Retrofit Kit.

- PM-9/PM-9G Power Supply (required)
- LCD-E3 LCD Display (required)
- LCD-SLP LCD Touchscreen Display (optional)
- DACT-E3 Dialer (optional)
- RPT-E3-FO/RPT-E3-UTP Network Repeater (optional)

<b>IF600XL-RETROFIT</b>	Gamewell IF602XL, IF610XL, IF632 (System Sensor or Apollo Retrofit)
-------------------------	------------------------------------------------------------------------

The Retrofit Kit includes the following plates:

- Inner display door
- Inner dead front cover
- Inner 3-bay door
- Backbox mounting plate

The above mounting plates support one of the following E3 Series mounting plates (sold separately).

- E3-ILI-C
- E3-INCC-C

### E3-ILI-C Mounting Plate:

E3-ILI-C Mounting Plate accommodates the following:

- Choice of two ILI loop cards
- ILI-MB-E3
- ILI95-MB-E3
- ILI-S-E3
- ILI95-S-E3

### E3-INCC-C Mounting Plate:

E3-INCC-C Mounting Plate accommodates the following:

- Choice of one ILI loop cards:
- ILI-MB-E3
- ILI95-MB-E3
- ILI-S-E3
- ILI95-S-E3

Optional-Select One of the following INI-VG Series boards:

- INI-VGC Command Center
- INI-VGX Voice Gateway
- INI-VGE Bulk Voice Gateway

## GAMEWELL-FCI



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FIRE ENGINEERING - BUILDING MATERIALS LISTING PROGRAM



# LISTING SERVICE

**LISTING No.** 7300-1516:0108 Page 1 of 1

**CATEGORY:** 7300 -- FIRE ALARM CONTROL UNIT ACCESSORIES/MISC. DEVICES

**LISTEE:** AES CORPORATION 285 NEWBURY ST, PEABODY, MA 01960  
Contact: Owais Hassan (978) 535-7310 Ext: 263 Fax (978) 535-7313  
Email: OHassan@aes-intellinet.com

**DESIGN:** \*Model 7788F Subscriber Unit, RF transceiver. Unit is intended for use with listee's separately listed Model IntelliNet 7705i system (7300-1516:104) and 7170-EM IPLinks, Remote Transceivers (7300-1516:105). Refer to listee's data sheet for additional detailed product description and operational considerations.

**RATING:** 120 VAC, 16.5 VAC 40VA Secondary, 12 VDC nominal

**INSTALLATION:** In accordance with listee's printed installation instructions, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction.

**MARKING:** Listee's name, model designation, and UL label.

**APPROVAL:** Listed as a two-way transceiver unit for use with separately listed compatible fire alarm control units.

\* 07-12-2013 bh



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Date Issued: **July 01, 2016**

Listing Expires **June 30, 2017**

Authorized By: **DAVID CASTILLO, Program Coordinator**  
*Fire Engineering Division*

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# LISTING SERVICE

**LISTING No.** 7315-1637:0102

Page 1 of 1

**CATEGORY:** 7315 -- POWER UNITS

**LISTEE:** HONEYWELL POWER PRODUCTS 12 Clintonville Road, Northford, CT 06472  
Contact: Vladimir Kireyev (203) 484-6277 Fax (203) 484-7309  
Email: Vladimir.kireyev@honeywell.com

**DESIGN:** Models HPF24S6, HPF24S8, HPFF8, HPFF8E, HPFF8CM, HPFF8CME, HPFF12, HPFF12E, \*HPFF12CM and \*HPFF12CME power limited power supply/battery chargers used for supervision and expanded power driving capability of up to four Notification Appliance Circuits (FACP Fire Circuits, Signaling Devices) or resettable/non resettable outputs. Model ZNAC-4 Class A converter. Refer to listee's data sheet for additional detailed product description and operational considerations.

**RATING:** 120 VAC, 24 VDC

**INSTALLATION:** In accordance with listee's printed installation instructions, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction.

**MARKING:** Listee's name, product designation, electrical rating and UL label.

**APPROVAL:** Listed as power supply/battery chargers for use with separately listed compatible fire alarm control units.

**XLF:** 7315-0075:0206

\*Rev. 10-20-10 bh



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*Fire Engineering Division*

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# LISTING SERVICE

**LISTING No.** 7125-1653:0188

Page 1 of 1

**CATEGORY:** 7125 -- FIRE ALARM DEVICES FOR THE HEARING IMPAIRED

**LISTEE:** System Sensor, Unincorporated Div of Honeywell Int'l Inc. 3825 Ohio Ave, St. Charles, IL 60174

Contact: Trish Linhart (630) 762-5025 Fax (630) 377-7245

Email: trish.linhart@systemsensor.com

**DESIGN:** Models CHSR and CHSW Chime/Strobes.  
Models P2R, P2W, P2RH and P2WH Horn/Strobes two-wire type, rectangular enclosure.  
Models PC2R, PC2W, PC2RH and PC2WH Horn/Strobes two-wire type, round enclosure  
Models P4R, P4W, P4RH and P4WH Horn/Strobes four-wire type, rectangular enclosure.  
Models PC4R, PC4W, PC4RH and PC4WH Horn/Strobes\* four-wire type, round enclosure.  
All models are intended for indoor use only unless other wise indicated. Models may be followed by the suffix "K" indicating indoor or outdoor use, or may be followed by suffix "P" for plain housing with no lettering. "K" suffix models are suitable for outdoor applications at temperatures from -40°F to +151°F (-40°C to +66°C) and are rated NEMA 4X when used with the System Sensor weather proof back boxes models SA-WBB (Wall), SA-WBBW (Wall), SA-WBBC (Ceiling) and \*SA-WBBCW (Ceiling). Refer to listee's data sheet for additional detailed product description and operational considerations.

**RATING:** Standard Horn/Strobes and Chime/Strobes 8 - 17.5 or 16-33 VDC/FWR  
Hi CD Horn/Strobes 16-33 VDC/FWR

**INSTALLATION:** In accordance with listee's printed installation instructions, applicable codes and ordinances, and in a manner acceptable to the authority having jurisdiction.

**MARKING:** Listee's name, model number, electrical rating, and UL label.

**APPROVAL:** Listed as \*horn/strobes or chime/strobes suitable for signaling appliances and equipment for the hearing impaired applications when used with separately listed compatible fire alarm control units. Horn/strobes with -K suffix are suitable for indoor or outdoor use, ceiling or wall mount. Chime section is suitable for private mode and indoor use only.  
Horn/Strobes or chime/strobes\* can generate the distinctive three-pulse audible Temporal Pattern Fire Alarm Evacuation Signal (for total evacuation) in accordance with NFPA 72, 2010 Edition. Refer to listee's Installation Instruction Manual for details.

\*Corrected 12-15-11 bh



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# LISTING SERVICE

**LISTING No.** 7300-1703:0102 Page 1 of 1

**CATEGORY:** 7300 -- FIRE ALARM CONTROL UNIT ACCESSORIES/MISC. DEVICES

**LISTEE:** GAMEWELL-FCI12 Clintonville Road, Northford, CT 06472  
Contact: Vladimir Kireyev (203) 484-6124 Fax (203) 484-7309  
Email: vladimir.kireyev@honeywell.com

**DESIGN:** Models AMM-4, \*AMM-4F, AMM-2 and \*AMM-2F monitor modules and Models AOM, AOM-2, AOM-2R, \*AOM-2RF, AOM-2S and \*AOM-2SF control modules. Refer to listee's data sheet for detailed product description and operational considerations.

**INSTALLATION:** In accordance with listee's printed installation instructions, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction.

**MARKING:** Listee's name, model designation, electrical rating and UL label.

**APPROVAL:** Listed as accessories for use with separately listed compatible control units. System Sensor Model SMB500 surface mount box (CSFM Listing No. 7300-1653:103) may be used as an enclosure for these modules

**NOTE:** FORMERLY: 7300-0694:178

**XLF:** 7300-1653:0103

12-4-07



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*Listing Expires* **June 30, 2017**

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# LISTING SERVICE

Page 1 of 1

**LISTING No.** 7270-1703:0115

**CATEGORY:** 7270 -- HEAT DETECTOR

**LISTEE:** GAMEWELL-FCI12 Clintonville Road, Northford, CT 06472  
Contact: Vladimir Kireyev (203) 484-6124 Fax (203) 484-7309  
Email: vladimir.kireyev@honeywell.com

**DESIGN:** Models ATD-L2, \*ATD-L2F, ATD-HL2 AND \*ATD-HL2F (fixed temperature) and ATD-RL2, \*ATD-RL2F (fixed temperature with Rate-of-Rise) electronic heat detectors. Refer to listee's data sheet for additional detailed product description and operational considerations.

**RATING:** ATD-L2, \*-L2F, ATD-RL2, -\*RL2F = 135°F fixed temperature  
ATD-HL2, \*-HL2F = 190°F fixed temperature

**INSTALLATION:** In accordance with listee's printed installation instructions, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction.

**MARKING:** Listee's name, model number, electrical ratings, and UL Label.

**APPROVAL:** Listed as heat detectors for use with separately listed compatible fire alarm control units. Refer to listee's Installation Instruction Manual for details.

**NOTE:** FORMERLY: 7270-0694:256



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Date Issued: **July 01, 2016**

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# LISTING SERVICE

**LISTING No.** 7150-1703:0119

**CATEGORY:** 7150 -- FIRE ALARM PULL BOXES

**LISTEE:** GAMEWELL-FCI12 Clintonville Road, Northford, CT 06472  
Contact: Vladimir Kireyev (203) 484-6124 Fax (203) 484-7309  
Email: vladimir.kireyev@honeywell.com

**DESIGN:** Model MS-7AF dual action fire alarm pull box. Refer to listee's data sheet for detailed product description and operational considerations.

**INSTALLATION:** In accordance with listee's printed installation instructions, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction.

**MARKING:** Listee's name, model number, rating, and UL label.

**APPROVAL:** Listed as fire alarm pull boxes for use with separately listed compatible fire alarm control units. Refer to listee's Installation Instruction Manual for details.

\* These manual pull boxes meet the requirements of UL Standard 38, 1999 Edition and California amendments.

**NOTE:** Formerly: 7150-0694:261

**XLF:** 7150-0028:0199

\*Updated 09-08-2009 fm



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# LISTING SERVICE

**LISTING No.** 7165-1703:0125

Page 1 of 2

**CATEGORY:** 7165 -- FIRE ALARM CONTROL UNIT (COMMERCIAL)

**LISTEE:** GAMEWELL-FCI12 Clintonville Road, Northford, CT 06472  
Contact: Brian Reynolds (203) 484-6124 Fax (203) 484-7309  
Email: brian.reynolds2@honeywell.com

**DESIGN:** Model E3 Series® BROADBAND and E3 Series® CLASSIC Voice Evacuation System. The E3 Systems may also work in conjunction with all the sub-assemblies of listee's 7100 Series Control Panel and NetSOLO systems (CSFM Listing No. 7165-1703:105 and 6911-1703:116, and 6911-1703:118).

Unit conveys all fire alarm, audio evacuation, voice paging, and fire fighter communications. Power-limited; non-coded, automatic, manual, smoke control, water flow, sprinkler supervisory, local auxiliary, central station, remote station, and proprietary service. Refer to listee's data sheet for additional detailed product description and operational considerations.

System components:

ILI-MB-E3; Intelligent Loop Interface Master Board  
PM-9, PM-9G\*; Power Supply  
ILI-95-MB-E3, ILI-95-S-E3; Loop Interface Subassemblies  
E3BB-FLUSH-LCD; Enclosure for ICD-E3  
E3BB-BA/-RA/-BAA/-RAA/-BB/-RB/-BC/-RC/-BD; Cabinets\*  
RPT-E3-FO or; Repeater Sub-assembly, Fiber Optic or  
RPT-E3-UTP; Repeater Sub-assembly, Unshielded twisted pair wire  
LCD-E3; LCD Keypad Display  
DACT-E3 sub-assembly; Digital alarm communicator transmitter  
ILI-S-E3; Intelligent Loop Unit, Expansion Board  
ANX-SR, ANX-MR-FO, ANX-MR-UTR; Addressable Node Expanders Sub Assembly\*  
INCC-E; Intelligent Network Enclosure\*  
INCC; Intelligent Network Central Command\*  
INI-VG, INI-VGC-UTP, INI-VGC-FO, INI-VGX-UTP; Intelligent Network Interface Sub Assembly\*  
INI-VGX-FO, INI-VGE-UTP, INI-VGE-FO; Intelligent Network Interface Sub Assembly\*  
ASM-16; Annunciator Switch Sub Assembly\*  
INX; Network Audio Transponder Enclosure\*  
ANU-48; Annunciator Sub Assembly\*  
NGA; Touch Screen LCD Display Sub Assembly\*  
LCD-7100; Remote LCD Display\*  
SBB-C4, SBB-D4; Backbox\*

\*Rev. 03-18-11bh



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*Fire Engineering Division*

FCI-VDR-D4B, FCI-DR-C4B, FCI-CR-D4B; Doors with locks\*  
 AA-100, AA-120; Amplifiers\*  
 AM-50-25, AM-50-70; Amplifier Sub Assembly\*  
 CHG120; Battery Charger with Cabinet\*  
 BC-1/FCI-LBB; Backbox\*  
 IPDACT-2; IP Digital Alarm Communicator\*  
 FPJ; Firefighters's Telephone Jack Receptacle\*  
 FHS; Portable Firefighters's Telephone Handset\*  
 7100 Series#; Fire Alarm Control Panel or  
 INI-7100 UTP#; Intelligent Network Interface Sub-assembly, [Twisted, unshielded wire] or  
 INI-7100 FO#; Intelligent Network Interface

**RATING:** 120 V, 60 Hz, 3.5 A Primary; 24 V dc, 9A Secondary

**INSTALLATION:** In accordance with listee's printed installation instructions, NFPA 72, applicable codes & ordinances and in a manner acceptable to the authority having jurisdiction.

**MARKING:** Listee's name, model designation, electrical rating and UL label.

**APPROVAL:** Listed as fire alarm control unit for use with separately listed electrically and functionally compatible initiating and indicating devices. Suitable for high-rise applications when used with the above voice evacuation systems.

This control unit can generate a distinctive three-pulse Temporal Pattern Fire Alarm Evacuation Signal (for total evacuation) in accordance with NPFA 72, 2002 Edition.

This control unit meets the requirements of UL Standard 864, 9th Edition.

**NOTE:** For Fire Alarm Verification Feature (delay of alarm signaling), the Retard/Reset/Restart period shall be 30 seconds or less.

\*Rev. 03-18-11bh



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Authorized By: **DAVID CASTILLO, Program Coordinator**  
*Fire Engineering Division*



## Description

The Gamewell-FCI, AM-50 Series amplifiers are a 50 watt, digital, switching power amplifier. The following lists the 2 types of AM-50 Series amplifiers that may be ordered.

- The AM-50-25 amplifier produces 25  $V_{RMS}$  audio output.
- The AM-50-70 amplifier produces 70.7 $V_{RMS}$  audio output.

The amplifiers are components of the following E3 Series® Systems.

- E3 Series Expandable Emergency Evacuation System
- E3 Series Combined Fire and Mass Notification System
- E3 Series Broadband Voice Evacuation System

### WARNING: AM-50 Series Amplifiers Node Restriction:

The INI-VGX can support up to 4 AM-50 Series amplifiers with the same output voltage. However, you cannot wire an AM-50-25 amplifier and an AM-50-70 amplifier to the same INI-VGX Voice Gateway Node.

Each AM-50 Series amplifier provides 2 speaker circuits that can be wired Style Y (Class “B”) or Style Z (Class “A”). The terminal connections can accommodate up to 12 AWG, twisted-pair, shielded wire. Both speaker circuits produce a combined total of 50 watts of power. The 50 watts of power can be divided between the 2 integral Class A/B speaker circuits. The 2 speaker circuits may be individually activated and supervised by an INI-VGX Transponder Voice Gateway.

The AM-50 Series amplifier can be programmed to broadcast 16 messages generated from its local INI-VGX Voice Gateway. In addition, the AM-50 Series amplifiers produce superior clarity for intelligible LIVE voice paging.

When the selected System Sensor, SpectrAlert® Advance Series speakers are used with the Manufacturer’s 520 Hz audiophile, the E3 Series® System is compliant with UL Standard 464 Low Frequency requirements.

For additional information, refer to the SpectrAlert Advance Series Data Sheet, P/N:9021-60346.

### Installation

As many as four AM-50 Series amplifiers can be installed in the following cabinets when supervised and controlled by an INI-VGX Voice Gateway.

- Cabinet B, INX-CAB-B
- Cabinet C, INX-CAB-C
- Cabinet D, INX-CAB-D

E3 Series® and SpectrAlert® are registered trademarks of Honeywell International Inc.  
 UL® is a registered trademark of Underwriters Laboratories, Inc.

## AM-50 Series Amplifiers



AM-50-25



AM-50-70

## Features

- Listed under UL® Standard 864, 9th Edition.
- Listed under UL Standard UL2572 for Mass Notification.
- Complies with UL Standard 464 for 520 Hz Low Frequency.
- Provides digital, switching amplifier technology.
- Produces 50 watts of digital power.
- Includes 2 speaker circuits, wired Style Y (Class B) or Style Z (Class A).
- Up to 4 AM-50 Series amplifiers with the same output voltage can be controlled by the INI-VGX voice gateway.

SIGNALING



LISTED  
S1869



APPROVED  
3017416



Approved  
FDNY:



City of  
Chicago  
Approved  
Class 1  
Class 2  
High Rise  
City of  
DENVER  
Approved

## Description (Continued)

The AM-50 Series amplifiers can be installed using the AM-50 Extender Plate whenever the E3 Series control panel is used in conjunction with the Autonomous Control Unit of the E3 Series Combined Fire and Mass Notification System.

- Cabinet C, E3 INCC-CAB-C

For additional information, refer to the E3 Series Combined Fire and Mass Notification Data Sheet, P/N:9021-60758

## Specifications

### AM-50-25 Amplifier

**Operating Voltage:** 27.3 to 20.4 VDC  
**Operating Current:** 0.086 amp normal standby  
**Alarm Current:** 2.206 amp max. alarm @ 50 Watt  
**Audio Output:** 50 watts max. @ 25 V<sub>RMS</sub>

### AM-50-70 Amplifier

**Operating Voltage:** 27.3 to 20.4 VDC  
**Operating Current:** 0.049 amp normal standby  
**Alarm Current:** 2.30 amp max. alarm @ 50 watt  
**Audio Output:** 50 watts max. @ 70.7 V<sub>RMS</sub>

### AM-50 Series Amplifiers

**Relative Humidity:** 0 to 93% max., (non-condensing) at 90° F (32° C)  
**Operating Temperature:** 32° to 120° F (0° to 49° C)  
**Dimensions:** 7 1/2" W x 3 1/2" H x 1 1/4" D  
(19 W x 9 H x 3 D cm)

## Ordering Information

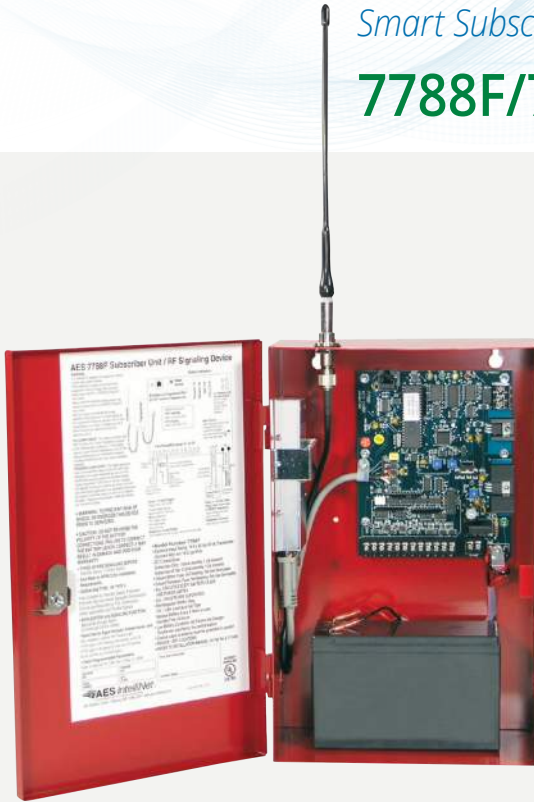
### Part Number Description

**1100-0456** AM-50-25, INX 25V<sub>RMS</sub> audio output, 50 watt amplifier  
**AM-50-70** INX 70.7V<sub>RMS</sub> audio output, 50 watt amplifier

### GAMEWELL-FCI

*Smart Subscribers for Commercial Fire Alarm Systems*

## 7788F/7744F Series Fire Subscribers



### Features

- AES-IntelliNet<sup>®</sup> smart mesh radio networks are self-forming, self-healing, and highly scalable
- AES-IntelliNet alarm communications technology never sunsets compared to cellular alternatives
- Each Smart Subscriber enables multiple paths to a central monitoring station
- Option to transmit full data from FACP digital dialer to AES-MultiNet receiver
- Simple and fast activation on AES-IntelliNet network

### Benefits

- Most stable and profitable fire alarm communication technology
- Network owner-operators retain virtually all RMR
- Meets UL 864 Commercial Fire Alarm requirements for primary standalone communication
- Ideal drop-in full-function replacement for phone lines
- Universal wireless Smart Subscriber Transceivers support all new and legacy FACPs

### Advanced Wireless Fire Alarm Monitoring

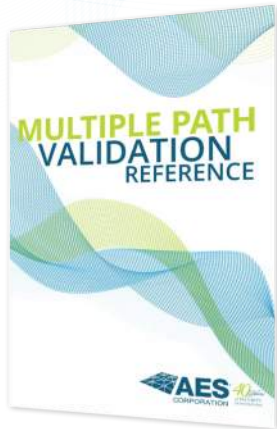
AES 7788F/7744F Series Subscribers are the ideal universal wireless communicators for any new or existing fire alarm system. AES-IntelliNet networks are built using AES Corporation's patented mesh radio communications technology. A Smart Subscriber at each alarm site acts as transmitter, receiver, and repeater of alarm signals across the network. This creates a smart long-range radio network with multiple pathways between each alarm site and the central receiver. Multiple pathways mean multiple redundancies assuring the most reliable delivery of signals and compliance with rigorous industry standards. AES-IntelliNet networks self-adjust to network changes and assure that signals automatically follow the shortest path available as the network of Subscribers grows.

### Highest Long Term Stability and Profitability

AES-IntelliNet remains the most stable and profitable fire alarm communication technology available today in the rapidly changing world of communications. AES private wireless networks never sunset compared to cellular technology and traditional phone lines. AES-IntelliNet networks maximize RMR generated from network alarm communication services because signals are delivered without the need for a costly operations center or cellular service providers.

## UL 864 Edition 9 Compliant – Primary Standalone Communicators

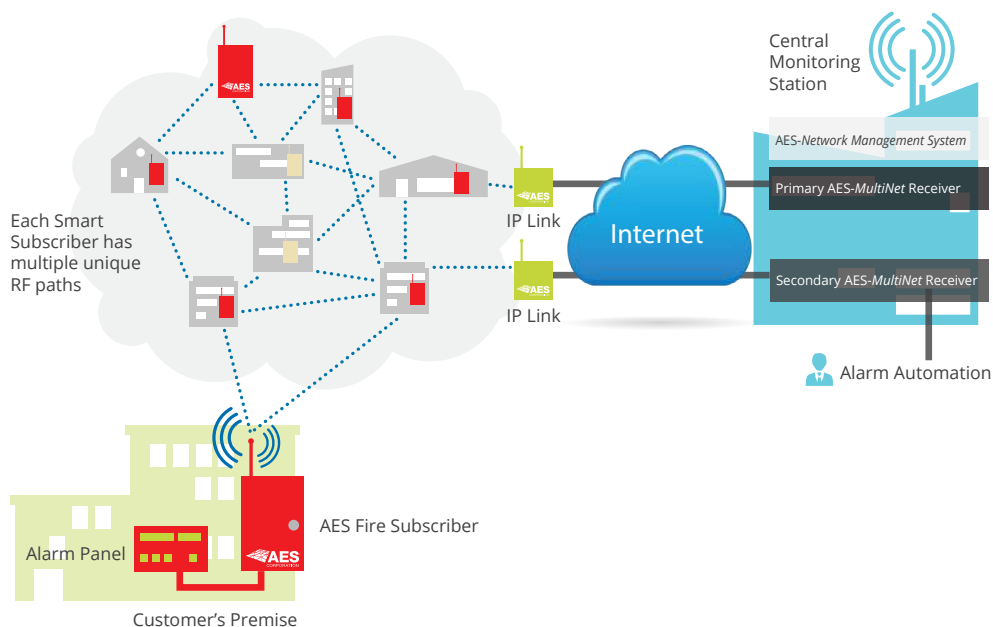
In order to meet UL approval and NFPA compliance, most fire alarm communicators require either a second communication technology or a costly service plan included with sole path cellular alternatives. With AES-IntelliNet alarm communications technology, each standalone AES 7788F/7744F Subscriber provides multiple RF pathways across the mesh radio network to the central monitoring station. To meet compliance standards, only 2 RF paths are required. Please refer to the official NFPA 72 National Fire Alarm and Signaling Code handbook, Chapter 26 (26.6.3.3.2 One-Way Private Radio Alarm Systems/Technology Reference Comparison Table A.26.6.1).



### Multiple RF Path Reference Guide

AES provides a *Multiple Path Validation Reference* guide detailing how to easily validate multiple RF paths at each AES 7788F/7744F Series Fire Subscriber. The guide also provides a complete listing of the codes and standards to which AES-IntelliNet products have been tested. To assist Authorities Having Jurisdiction (AHJs) with the fire alarm inspection process, the guide and other valuable installer tools are available for download from the company website. Visit our Fire Marshal Resources page at (<http://www.aes-intellinet.com/products/fire/fire-marshall-resources/>).

## AES-IntelliNet® Private Wireless Mesh Network



Each Smart Subscriber acts as transmitter, receiver, and repeater creating a smart long-range radio network with multiple pathways and multiple redundancies. The AES-IntelliNet network is self-forming, self-healing, highly scalable and assures that signals follow the shortest path available as the network expands.

## Cost Free Supervised Operation

AES Subscribers offer fully-supervised operation that includes monitoring of primary and back-up operating power as well as the radio connection to the AES-*IntelliNet* network. Each Subscriber performs “Check-ins” with the AES central station receiver at least once every 24 hours which complies with the UL 864 standard for commercial fire alarm communications. The supervision Check-in time can be set to as often as needed for the application. Because the central station owns and operates the long-range wireless network, there is no cost for air time to transmit supervisory signals. This is very different from cellular alternatives which require an aggressive supervision Check-in schedule in order to comply with UL 864 listing. The high monthly cost for cellular service fees significantly reduce RMR profit.

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Unlike cellular, there is no cost for air time to transmit supervisory signals.

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## Full Data Module Option - Ideal replacement for Phone Lines

AES Subscribers transmit consolidated alarm, trouble, and supervisory signals triggered by a FACP output relay. Subscribers with an integrated AES-*IntelliPro* Fire full data module transmit full alarm zone and event codes captured from a panel's digital communicator. Both options individually meet UL and NFPA 72 requirements. AES Fire Subscribers with built-in full data module are the ideal drop-in full-function replacement for phone lines for communicating signals from both new and existing UL commercial fire alarm systems. Replacing phone lines with AES-*IntelliNet* maximizes RMR profit with significant bottom line impact, unlike with cellular technologies that charge high monthly service fees.

## How to Order

AES Fire Subscribers	
7788F	8 Zone Fire Subscriber, 8 Supervised Zones, Red Enclosure.
7744F	4x4 Zone Fire Subscriber, 4 Reversing Polarity, 4 Supervised Zones, Red Enclosure.
7788F-ULP	8 Zone Fire Subscriber, 8 Supervised Zones, includes 7794 AES- <i>IntelliPro</i> Fire, Red Enclosure.
7744F-ULP	4x4 Zone Fire Subscriber, 4 Reversing Polarity, 4 Supervised, includes 7794 AES- <i>IntelliPro</i> Fire, Red Enclosure.
7788F-ULP-P	8 Zone Fire Subscriber, 8 Supervised Zones, includes 7795 AES- <i>IntelliPro</i> Fire, Red Enclosure. UL listed for primary standalone communication with fire radios.
7744F-ULP-P	4x4 Zone Fire Subscriber, 4 Reversing Polarity, 4 Supervised Zones, includes 7795 AES- <i>IntelliPro</i> Fire, Red Enclosure. UL listed for primary standalone communication with fire radios.
7788F-C	8 Zone Fire Alarm Subscriber. ULC listed for Canada.
7788F-C-ULP	7788F-C Fire Alarm Subscriber with AES- <i>IntelliPro</i> Fire full data module. ULC listed for Canada.
Add-on AES- <i>IntelliPro</i> Fire Modules	
7794	AES- <i>IntelliPro</i> Fire Full Data Module. UL listed for supplemental communication with fire radios.
7795	AES- <i>IntelliPro</i> Fire Full Data Module (7794) with 7762 Hardware Supervisory Module and 7740 AES Local Annunciator. UL listed for primary standalone communication with fire radios.
7742	7762 Hardware Supervisory Module and 7740 AES Local Annunciator. 7762 module provides power and supervision of the 7740 AES Local Annunciator.
AES Local Annunciator	
7740	7740 AES Local Annunciator. UL listed for use with 7795 module or 7742 module.

# Technical Specifications

## 7788F/7744F

### Dimensions

- 13.25"H x 8.5"W x 4.3"D  
(34cm H x 21.5cm W x 11cm D)

### Weight

- Approx. 7 pounds (3.2 kilograms),  
excludes battery

### Radio Frequency

- Standard Frequency Range: 450-470MHz  
(others available in 400-512MHz range)
- Output Power – 2 Watts and 5 Watts

### Antenna

- Included 2.5 db tamper resistant antenna  
mounts on enclosure
- Multiple remote antenna options available

### Power Input

- 16.5VAC, 40VA transformer (not included)  
(AES 1640, ELK TRG1640, MG Electronics  
MGT1640 – UL Listed for use)

### Backup Battery

- Will charge 12V battery up to 7.5 - 12 AH,  
• Requires 12VDC 7.5 AH battery for UL 864

### Alarm Signal Inputs (subscriber)

- 7788F – 8 individually programmable zones
- 7744F – 4 individually programmable  
zones and 4 reverse polarity inputs

### UL Standards

- UL 864 Edition 9 – Standard for  
Control Units and Accessories for Fire  
Alarm Systems
- UL 365 – Standard for Police Station  
Connected Burglary Alarm Units  
and Systems
- UL 1681 – Standard for  
Central Station Burglary Alarm Units

### Antenna Cut/Communication Trouble Output

- Form C relay; fail secure; rated for  
24 VDC 1A resistive

### Reset Button

- Located on main circuit board

### Operating Temperature

- 0° to 50° C (32° to 122°F)

### Storage Temperature

- -10° to 60° C (14° to 140°F)

### Relative Humidity

- 0 to 85% RHC, Non-Condensing

## 7794

- Transmits full data to AES-*MultiNet*  
receiver using Contact ID or Pulse formats
- Formats Supported: Contact ID, Pulse  
3+1, Pulse 4+1, Pulse 4+2, Modem IIe,  
and Modem IIIa2

### Input/Output Connections

- AES Subscriber – data and power
- Handheld/PC programming port
- Plain Old Telephone Service (POTS)  
incoming phone line
- Phone output connection from  
alarm panel
- Trouble output (form C relay)

### Size

- 4.875" x 5" (12.3cm x 12.7cm)

### Power Requirements

- 12 VDC nominal, primary and backup  
power provided by the AES RF  
Transceiver Unit

### Current Consumption

- 350 mA nominal

## 7795

- P/N 40-7795 is a kit that includes 7794  
module and 7762 Hardware Supervisory  
module. For 7794, please see Technical  
Specifications above

## 7762

- Hardware Supervisory Module

### Input/Output Connections

- J1 - AES 7794 (J2) or Subscriber  
(J1) - data and power
- Input for Subscriber J4 Output
- Input for AES 7740 Local  
Annunciator - data and power
- AES 7740/AES 7794 Trouble  
Output to Subscriber input zone

### Size

- 2.5" x 4.9375" (6.3cm x 12.5cm)

### Power Input

- 12VDC nominal, power supplied  
from AES 7794 module or AES  
7788F/7744F Subscribers

### Current Consumption

- 40 mA average; 100 mA peak

Specifications Subject to Change Without Notice



## About AES Corporation

Established in 1974, AES Corporation empowers companies to grow profitable alarm monitoring businesses, and government agencies to enhance security anywhere in the world. By providing the industry's only patented owner operated and controlled private wireless mesh networks, AES ensures superior reliability, low Total Cost of Ownership (TCO) and optimal Recurring Monthly Revenue (RMR) while reducing dependence on service provider infrastructures. The company's flagship AES-*IntelliNet*® systems are deployed in over a half million locations worldwide.

For more information, go to [www.aes-corp.com](http://www.aes-corp.com) or call  
**(800) 237-6387** or contact us at [sales@aes-corp.com](mailto:sales@aes-corp.com)

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### Description

The Gamewell-FCI Velociti® Series addressable output supervised control module (AOM-2SF) allows a Gamewell-FCI analog addressable fire alarm control panel to switch an external power supply, such as a DC supply or audio amplifier (up to 80 V<sub>RMS</sub>) to notification appliances. The AOM-2SF notification appliance circuit can be wired either Class A (Style Z) or Class B (Style Y). It also supervises the wiring to the connected loads and reports their status to the panel as NORMAL, OPEN or SHORT CIRCUIT. The module contains a panel controlled LED.

The Velociti® Series use a communication protocol that substantially increases the speed of communication between the SLC devices and certain Gamewell-FCI analog addressable fire alarm control panels. These devices operate in a grouped fashion. If one of the devices in the group has a status change, the panel's microprocessor stops the group poll and concentrates on the single device. The net result is a superior response speed up to five times greater than the earlier designs.

The AOM-2SF module is designed for installation in the signaling line circuit of any Gamewell-FCI analog addressable fire alarm control panel. The signaling line circuits of Gamewell-FCI analog addressable fire alarm control panels are designed to accommodate up to 159 modules per circuit. The AOM-2SF is designed to mount in a 4" (10.16 cm) square junction box 2 1/8" (5.5 cm) deep.

Table 1 lists the relay contact ratings.

Current Rating	Maximum Voltage	Load Description	Application
3A	30 VDC	Resistive	Non-Coded
2A	30 VDC	Resistive	Coded
0.9A	110 VDC	Resistive	Non-Coded
0.5A	125 VAC	Resistive	Non-Coded
0.5A	30 VDC	Inductive (L/R=5ms)	Coded
1A	30 VDC	Inductive (L/R=2ms)	Coded
0.5A	125 VAC	Inductive (PF=.35)	Non-Coded
0.7A	75 VAC	Inductive	Non-Coded

**Table 1: Relay Contact Ratings**

Velociti® is a registered trademark of Honeywell International Inc.  
UL® is a registered trademark of Underwriters Laboratories Inc.

### Addressable Output Relay Supervised Control Module



AOM-2SF

### Features

- Listed under UL® Standard 864 and UL2572 for Mass Notification.
- Designed as a compact size to allow easy installation.
- Includes Class A, Style Z, or Class B, Style Y notification appliance circuit.
- Accommodates audio amplifiers up to 80 V<sub>RMS</sub>.
- FM Listed as suitable for a releasing device service.
- Includes a bicolor LED that flashes green whenever the module is addressed, and lights steady red upon activation\*.

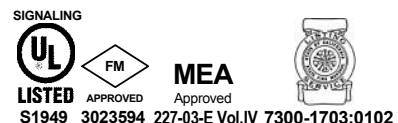
\*Note: Only the red LED is operative in panels that do not operate in Velociti® mode.

### Specifications

- Supervisory Current:** .000375 amps  
**Alarm Current:** .0065 amps  
**Operating Temperature:** 32° to 120° F (0° to 49° C)  
**Relative Humidity:** 10 to 93% relative humidity (non-condensing)  
**Dimensions:** 4 1/2" H x 4" W x 1 1/4" D (11.4 H x 10.2 W x 3.2 D cm)

### Ordering Information

- |                    |                                              |
|--------------------|----------------------------------------------|
| <b>Part Number</b> | <b>Description</b>                           |
| AOM-2SF            | Addressable output supervised control module |





by Honeywell

# E3 Series<sup>®</sup> Control Panel

## Description

The E3 Series<sup>®</sup> Expandable Emergency Evacuation System by Gamewell-FCI is in the forefront of the latest generation of fire alarm control panels. Employing the new high-speed Velociti<sup>®</sup> sensors, the E3 Series provides previously unattainable polling speed and response together with the flexibility demanded by today's emergency evacuation systems. In addition to their high-speed polling rate, the Velociti Series of sensors feature bi-polar LEDs that flash green for normal polling, and light red steadily to indicate an alarm.

The E3 Series is equipped with an 80-character LCD-E3 alphanumeric LCD display that allows 40 characters to be user-defined for custom installations. Up to six keyboard LCD displays may also be remotely located. In addition, you can install five of the familiar LCD-7100/RAN-7100 remote displays. The displays show instant system status information and can be connected in any desired area of an installation.

A high-speed 32-bit processor easily tackles a wide array of applications from small office buildings to multi-complex, high-rise installations.

The 64 node networking is made possible by 625K baud/ARCNET communications using twisted-pair copper cable, fiber-optic cable, or a combination of both. In addition, the Addressable Node Expander (ANX) board expands the network to 122 nodes.

The basic E3 Series is equipped with an ILI-MB-E3/ILI95-MB-E3 Intelligent Loop Interface-Main Board, ILI-S-E3/ILI95-S-E3 Intelligent Loop Interface Expansion Board, ANX, and ASM-16 Addressable Switch Module that features 16 software programmable switches, each accompanied by red, green and yellow LEDs that can be programmed to indicate operation of the switches. Additional ASM-16 modules may be added to expand the operation to a plateau previously unimagined.

The Intelligent Loop Interface - Expansion Board (ILI-S-E3/ILI95-S-E3) provides the E3 Series control panel with two additional electrically isolated signaling line circuits. The layout is similar to the ILI-MB-E3/ILI95-MB-E3 with the exception that a number of components are omitted. It occupies one node on the Broadband network.

E3 Series<sup>®</sup> and Velociti<sup>®</sup> are registered trademarks of Honeywell International Inc.

UL<sup>®</sup> is a registered trademark of Underwriters Laboratories Inc.

## Expandable Emergency Evacuation System



E3 Series

## Features

- IBC Seismic Certified.
- Listed under UL<sup>®</sup> Standard 864, 9th Edition.
- UL Listed for smoke control (dedicated and non-dedicated) when properly configured.
- UL Listed and FM Approved for Pre-action/Deluge and Agent Releasing.
- Styles 4, 6, or 7\* signaling line circuits.
- Two to 244 SLCs each supporting 159 sensors, 159 modules and 159 addressable sounder bases.
- 625K baud ARCNET communications using wire, fiber, or mixed configurations for installation flexibility.
- High-speed 32 bit processor and 8100 event history log.
- Advanced Boolean logic-based programming such as AND, OR, NOT, time delay and calendar functions configurable via computer programming.
- Supports up to (16), ASM-16 addressable switch or ANU-48 LED driver modules per ILI-MB-E3/ILI95-MB-E3.
- Two Class A, Style Z or Class B, Style Y, notification appliance circuits rated at 2.0 amps. per circuit.
- Integral city connection.
- Flexible 115,200 baud high speed RS-232 interface.
- 40 character user-defined text per device.
- 15 LCD-SLP displays/annunciators, 6 LCD-E3 displays/annunciators, 5 LCD-7100/RAN-7100 remote LED annunciators per ILI-MB-E3/ILI95-MB-E3.

\*Style 7 wiring requires the use of System Sensor M500X Isolator Modules.

SIGNALING



APPROVED S1869 3025415



ME A Approved FDNY #: 6175

COA # 231-06-E 7165-1703:0125



City of Chicago Approved

City of Denver Approved



## GAMEWELL-FCI

12 Clintonville Road, Northford, CT 06472-1610 USA • Tel: (203) 484-7161 • Fax: (203) 484-7118

Specifications are for information only, are not intended for installation purposes, and are subject to change without notice. No responsibility is assumed by Gamewell-FCI for their use.

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[www.gamewell-fci.com](http://www.gamewell-fci.com)

9020-0637 Rev. Q page 1 of 2



## Description (Continued)

Each ILI-MB-E3/ILI95-MB-E3 can support as many as sixteen ANU-48 LED Driver modules supporting hundreds of LEDs on a 3rd party graphic annunciator for remote annunciation. The ANU-48 modules may be installed in any Listed remote annunciator. It can be remotely located via an RS-485 serial interface.

An array of cabinets allows for neat, compact, attractive installations.

## Installation

The E3 Series expandable emergency evacuation system offers four cabinet size options. A typical cabinet includes a backbox, an inner door, and an outer door. The E3 Series cabinet assembly is a compact 19 3/8" (49 cm) wide, wall-mounted enclosure.

Cabinet A includes the following four options:

- Cabinet A1 inner door mounted to the backbox. The backbox houses one NGA module.
- Cabinet A2 inner door mounted to the backbox. The backbox houses one LCD-E3 module.
- Two or three-bay inner door mounted to the backbox. The backbox typically houses one LCD-E3, or one NGA, and one or two ASM-16 modules.

Cabinet B contains a space for the ILI-MB-E3/ILI95-MB-E3, PM-9/PM-9G modules and batteries set inside the backbox. Additional module options mounted on the backbox include the DACT-E3, and RPT-E3 or ILI-S-E3/ILI95-S-E3/ANX. The 2-bay inner door houses one LCD-E3 module and one ASM-16 module.

Both Cabinets C and D include the following:

- Pre-assembled outer door that gives visibility to the fire fighter's phone handset and a microphone voice messaging system.
- Two inner door panel selections that may contain optional modules to meet the facility operation requirements.

In the Cabinet B, C and D backboxes, the ANX appears in the same place as the ILI-MB-E3/ILI95-MB-E3 and PM-9/PM-9G. For information on the installation instructions for any of the E3 Series cabinets, refer to the E3 Series® Expandable Emergency Evacuation Manual  
Part Number: LS10080-051GF-E.

## Specifications

- Operating Voltage:** 24 VDC  
**Operating Temperature:** Not to exceed the range of 32° to 120° F (0 to 49° C)  
**Relative Humidity:** Not to exceed 93% non-condensing at 90° F (32° C)

## Features (Continued)

### Velociti® Intelligent Sensor Features:

- Poll 318 devices in less than two seconds.
- Activate up to 159 outputs in less than five seconds.
- LED's blink associated device address during Walk Test.
- Fully digital, hi-precision protocol.
- Up to 9 levels of sensitivity adjustment.
- Pre-Alarm adjustable between 15 levels for both Alert and Action.
- Day/night automatic sensing adjustment.
- Sensitivity windows:
  - Ion .05 to 2% obscuration.
  - Photo 1 to 3% obscuration.
  - Laser .02 to 2% obscuration.
  - MCS Acclimate2F .5 to 4%, also self-adjustable options 1 to 2%, 2 to 3%, and 3 to 4%.
  - HARSH 1 to 3% obscuration.
- Drift compensation.
- Each Loop Card has its own integral processor providing maximum survivability on loss of any other component. SLC provides full response on loss of any other system processor.
- Optional programmable switches can be configured to enable, disable or group any combination of output devices.
- Integrated point or Grouped Cross Zoning allows for numerous devices installed at any location to cooperate and determine alarm condition.
- Automatic detector sensitivity testing.
- DIRTY and VERY DIRTY detector maintenance alerts.

## Ordering Information

Part Number	Description
<b>ILI-MB-E3</b>	Intelligent Loop Interface-Main Board
<b>ILI95-MB-E3</b>	Intelligent Loop Interface-Main Board
<b>ILI-S-E3</b>	Intelligent Loop Interface-Expansion Board
<b>ILI95-S-E3</b>	Intelligent Loop Interface-Expansion Board
<b>ANX-SR</b>	Addressable Node Expander-Single Ring
<b>ANX-MR-FO</b>	Addressable Node Expander-Multi-Ring Fiber Optic
<b>ANX-MR-UTP</b>	Addressable Node Expander-Multi-Ring Twisted-pair
<b>LCD-E3</b>	LCD-E3, LCD Keypad Display
<b>RPT-E3-UTP</b>	Network Repeater, unshielded, twisted-pair
<b>FML-E3</b>	Multi-Mode Fiber-Optic Module
<b>FSL-E3</b>	Single-Mode Fiber-Optic Module
<b>DACT-E3</b>	Digital Alarm Communicator Transmitter
<b>ANU-48</b>	ANU-48 LED Driver Module
<b>ASM-16</b>	Addressable Switch Module
<b>NGA</b>	LCD Network Graphic Annunciator
<b>PM-9</b>	Power Supply Module
<b>PM-9G</b>	Power Supply Module
<b>LCD-7100</b>	Remote LCD Display
<b>RAN-7100</b>	Remote LCD Display

For additional information on the cabinets, refer to the E3 Series Cabinets data sheet (Part Number: 9020-0649).

### Seismic Battery Bracket Kits

For information on the types of Seismic Battery Bracket Kits that are available, the Seismic Battery Bracket Kit Part Numbers and the installation instructions, refer to the following documents:

- Seismic Battery Bracket Installation Guide, P/N: 53839
- E3 Series Cabinets Data Sheet, P/N: 9020-0649

### GAMEWELL-FCI

by Honeywell

## Description

The Gamewell-FCI, E3 Series<sup>®</sup>, Local Operating Console (LOC) is a paging component that provides emergency notification and can be remotely distributed in real-time via pre-recorded messages, live voice paging, or text messages. It is used in the following E3 Series Systems.

- E3 Series Expandable Emergency Evacuation System
- E3 Series Combined Fire and Mass Notification System to comply with the DOD, United Facilities Criteria (UFC) guidelines
- E3 Series Broadband Voice Evacuation Systems

The LOC's robust distributed messaging capabilities allow users to program the system to broadcast messages that automatically change as the situation changes. This versatile feature makes it possible for the system to simultaneously distribute different emergency communications to zones, floors, multiple buildings, large outdoor campuses or facility areas.

The Local Operating Console uses a state-of-the-art Digital Signal Processor (DSP) that produces reliable, high fidelity audio messaging and it allows live voice instructions. The Network Touchscreen Graphic Annunciator (NGA) provides the LOC with the capability to display text messaging over the network to all Local Operating Consoles within a protected area. The Addressable Switch Module (ASM-16) includes 16 programmable switches for message, control, and zone paging.

The E3 Series LOC communicates over the network, allowing full communication and control over a single pair of wires or fiber-optic cable. This E3 distributed architecture, including Style 7 wiring configuration, provides complete supervision and survivability if a fault condition occurs or the system is compromised. All LOCs on the network are supervised.

The Local Operating Console comprises the following:

- AA Cabinet with mounting patterns for the INI-VG Series
- 3-slot inner door for mounting the following:
  - One INCC-MIC paging microphone
  - One or two ASM-16s
  - One ASM-16 and one NGA

**Note:** Gamewell-FCI recommends you install the speakers at 4 ft. (1.2 m) or more from the microphone.

## Ordering Information

Part Number	Description
E3BB-BAA	AA Cabinet
E3ID3-A	Inner Door, 3 Slots
1100-1321	INI-VGC, Voice Gateway
1100-0452	INCC-MIC, Paging Microphone
1100-0455	ASM-16, Addressable Switch Module

## Optional Components

1100-0505	NGA, Network Graphic Annunciator
Thumb lock	Thumb quarter turn latch
E3-TRIMKIT-A	Trim Ring

## Local Operating Console



E3 Series LOC

## Features

- Listed under UL<sup>®</sup> Standard UL2572 for Mass Notification.
- IBC Seismic Certified.
- Offers instantaneous audio or text messaging.
- Includes 16 message capacity with up to a 3 minute duration per each LOC.
- Supports up to 2 ASM-16 modules for a total of 32 switches for each LOC.
- Allows messages to be easily field-configured via a laptop computer.
- Built of 16-gauge steel backbox with a full Lexan<sup>®</sup> window and keylock on the door.
- Includes an optional thumb quarter turn latch and trim ring available.
- Provides all communication signals and control-by-event sequences connected over twisted, unshielded pair of wires or fiber-optic cable.
- Uses E3 Series distributed architecture, including Style 7 wiring configuration.
- Transmits at a network data transfer rate of 625K baud.

E3 Series<sup>®</sup> is a registered trademark of Honeywell International Inc.

Lexan<sup>®</sup> is a registered trademark of GE Plastics, a subsidiary of General Electric Corp.

UL<sup>®</sup> is a registered trademark of Underwriter's Laboratories Inc.

SIGNALING



MEA  
Approved  
FDNY:

COA # 231-06-E



City of  
Chicago  
Approved  
Class1  
Class2  
High Rise

City of  
Denver  
Approved



THE VMA GROUP  
Reference Certificate  
of Compliance  
VMA-45894-02C  
(Revision 1)

by Honeywell

## Description

The Gamewell-FCI, HPFF8 is a Notification Appliance Circuit (NAC) expansion panel designed to extend the power capabilities of existing NACs and provide power for the auxiliary devices. The HPFF8 connects to any 12 or 24V Fire Alarm Control Panel (FACP) or stand alone.

The HPFF8 is available in 8.0 amps. It provides regulated and filtered 24VDC power to each of the four NACs and an auxiliary output. The NAC outputs are rated at 3.0 amps each (the total output cannot exceed 8.0 amps). The auxiliary output is rated at 2.0 amps. This output is continuously supplied, even in alarm, and therefore must be taken into account for power supply loading and battery size calculations.

The NAC outputs may be configured as any of the following:

- Four Class B (Style Y)
- Two Class A (Style Z)
- Two Class B and one Class A
- Four Class A with the optional HPP31076 Class A adapter installed

These power supplies contain an internal Battery charger capable of charging up to 26.0 amp-hour (AH) batteries.

The HPFF8 is mounted in lockable wall cabinet units that can accommodate up to two (2), 18AH batteries. A multi-pack option allows for up to four chassis mount units installed in a single lockable SBB-D4 enclosure. These chassis mount units have a "CM" suffix, HPFF8CM and can accommodate two 12AH batteries. Power supplies are available in either 120VAC/60 Hz or 240VAC/50 Hz.

One of the most challenging aspects of a retrofit application is locating the existing End-of-Line (EOL) resistor. In these applications that have EOL values, other than the 3.9k normally used with the HPFF8, a single resistor matching the existing EOL can be used as a reference for all the outputs. This feature speeds the installation and the system checkout, because the actual EOL does not need to be located and changed in the circuit. The reference resistor must be within the range of 1.9k to 25k.

## NAC Expander/Power Supply



HPFF8

## Features

- Four (4) supervised notification application circuits (NACs) capable of supplying +24VDC at 3.0 amp maximum each
- NAC output circuits may be configured as any of the following:
  - Four Class B (Style Y)
  - Two Class B & one Class A
  - Two Class A (Style Z)
  - Four Class A with the optional HPP31076 Class A adapter installed
- Four field-programmable operational modes
- 2.0 amp auxiliary continuously supplied output
- Two (2) fully supervised input/output control circuits
- Temporal coding and sync protocols compatible with the following notification appliance brands:
  - System Sensor
  - Faraday
  - Gamewell
  - Amseco
  - Cooper-Wheelock
  - Gentex
- Supervised AC input, battery voltage, auxiliary output, charger, and earth ground faults
- Trouble indication for supervision of the following:
  - NAC circuits
  - Auxiliary output
  - AC input
  - Charger
  - Battery voltage
  - Open contacts in the initiating device signal inputs (for FACP trouble notification)
  - Earth ground faults by individual status LED's
- Separate Trouble and AC Fail Form-C relay Contacts

An ISO 9001-2000 Company



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## Features (Continued)

- The Trouble Form-C relay contacts selectable for immediate or a 2 hour delay with AC failure
- 26 AH battery charger capability; the wall cabinet supports two 12V 18AH batteries, while the multi-pack equipment cabinets supports two 12V 12AH batteries.
- NAC Overload protection and indication
- Up to four chassis mount units (HPFF8CM) can be installed in the SBB-D4 backbox
- Wall mount units can be configured to internally house the following:
  - one AOM-2SF single control module
  - one AOM-2R single relay module

## Specifications

<b>Primary Input Power:</b>	120VAC/60Hz, 3.6A or 220VAC/50Hz, 1.5A
<b>Secondary Power:</b>	24 volt operation: two (2), 7-24 AH batteries
<b>Battery Charging Capacity:</b>	Up to 26 AH batteries mounted
<b>Battery Space:</b>	
<b>HPFF8 Cabinet:</b>	Up to two 18AH batteries
<b>SBB-D4 Cabinet:</b>	Up to two 12AH batteries per supply
<b>Total Output Power:</b>	8.0A max
<b>Standby Current:</b>	0.030 A
<b>Auxiliary Power Output:</b>	0.15A under all conditions 2.0A if load is removed during operation (external relay or AC Fail Relay is required)

## Specifications (Continued)

<b>NAC Output Ratings:</b>	24VDC fully regulated, 3.0A max per circuit (8.0A total)
<b>End-of-Line Resistor Range:</b>	2K to 25k ohm, ½ watt
<b>Common Trouble Relay/AC Fail Relay:</b>	2.0A at 28VDC or 120VAC
<b>Input Control Circuit:</b>	16-30VDC @ 5mA min.
<b>Temperature Rating:</b>	32°F to 120°F (0°C to 49°C)
<b>Relative Humidity:</b>	10% to 93% non-condensing
<b>Cabinet Dimensions:</b>	
<b>HPFF8 Cabinet:</b>	16.65" W x 19.0" H x 5.2" D (42.29 W x 48.26 H 13.23 D cm)
<b>SBB-D4 Cabinet:</b>	24" W x 45.9" H x 5.15" D (60.96 W x 116.52 H x 13.1D cm)

## Ordering Information

Part Number	Description
<b>HPFF8</b>	8A fire rated power supply operating at 120VAC/60 Hz. Unit includes red enclosure with HPP lock and key
<b>HPFF8CM</b>	8A fire rated power supply - chassis mounted operating at 120VAC/60 Hz. Unit includes mounting hardware for installation in the SBB-D4 enclosure
<b>HPFF8E</b>	8A fire rated power supply operating at 240VAC/50 Hz
<b>HPFF8CME</b>	8A fire rated power supply chassis mounted operating at 240VAC/50 Hz
<b>HPP31076</b>	Class A (Style Z) NAC module
<b>FCI-VDR-D4</b>	Vented door, PK-625 lock and key for SBB-D4 backbox, black
<b>SBB-D4</b>	Backbox, accepts up to 4 chassis, black

### GAMEWELL-FCI



by Honeywell

# MS-7 Series

## Description

The Gamewell-FCI, MS-7 Series manual fire alarm stations are available in a wide variety of configurations. The Stations comply with the Americans with Disabilities Act (ADA) 5-lb. maximum pull force requirement. Operating instructions and Braille text are engraved in the handle. All stations have a key lock/reset which is keyed alike with Gamewell-FCI fire alarm control panels and other manual fire alarm stations.

### MS-7AF Velociti Addressable Station

The MS-7AF Velociti<sup>®</sup> Series addressable station is a double action station designed for installation in the signaling line circuit of Gamewell-FCI analog addressable control panels. Activation of the station causes its assigned address to register at the control panel. The door contains an LED which flashes green in normal condition and lights steady red when the station has been activated.\* The station features screw terminals.

### MS-7ASF Velociti Addressable Station

The MS-7ASF Velociti<sup>®</sup> Series addressable station is a single action station designed for installation in the signaling line circuit of Gamewell-FCI analog addressable control panels. Activation of the station causes its assigned address to register at the control panel. The door contains an LED which flashes green in normal condition and lights steady red when the station has been activated.\* The station features screw terminals.

The Velociti<sup>®</sup> Series stations use a communication protocol that substantially increases the speed of communication between the sensors and certain Gamewell-FCI analog addressable fire alarm controls. These devices operate in a grouped fashion. If one of the devices in the group has a status change, the panel's microprocessor stops the group poll and focuses on the single device. The net effect is response speed up to five times greater than earlier designs.

### MS-7 Double Action Station

The MS-7 double action station is used with conventional fire alarm control panels. It features a set of single pole contacts and screw terminals for connection to an initiating circuit.

Velociti<sup>®</sup> is a registered trademark of Honeywell International Inc.

UL<sup>®</sup> is a registered trademark of Underwriter's Laboratories Inc.

LEXAN<sup>®</sup> is a registered trademark of GE Plastics, a subsidiary of General Electric Company.

## Non-Coded, Manual Fire Alarm Stations



MS-7

## Features

- Addressable stations compatible with all Gamewell-FCI analog addressable fire alarm controls
  - Conventional stations suitable for use with any UL<sup>®</sup> Listed control panel
  - Both single and double action stations available
  - Tumbler lock for test and reset keyed alike with Gamewell-FCI controls
  - Surface or semi-flush mounting
  - Shock and vibration resistant
  - Stations (MS-7LOB) Listed for outdoor applications
  - Complies with ADA pull force requirements
- \*Only the red LED is operative in panels that do not operate in Velociti mode.

SIGNALING



S2465



APPROVED 3023594

MEA

Approved

67-02-E Vol.VIII



7150-1703:0119

7150-1703:0170

7150-1703:0109



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### MS-7S Single Action Station

The MS-7S single action station is used with conventional fire alarm control panels. It features a set of single pole contacts and wire leads for connection to an initiating circuit.

### MS-7SP Double Action Station

The MS-7SP is a double action station similar to the MS-7 station, with the additional feature of both English and Spanish instructions molded into the unit.

### MS-7LR Dual-action Agent Release Station

The MS-7LR is designed for use with the Gamewell-FCI fire alarm control panels with releasing capabilities and Flex Series releasing systems. It features a set of single pole contacts and screw terminals for connection to an initiating circuit.

### MS-7LRA Agent Release Station with Abort

The MS-7LRA is designed for use with the Gamewell-FCI fire alarm control panels with releasing capabilities and Flex Series releasing systems where system abort capabilities are required. It consists of an MS-7LR mounted on a plate with an abort switch and LED indicators for system normal, and system activated status.

### MS-7LOB Double Action Station (Listed for Outdoor Applications)

The MS-7LOB station must be mounted on a Model SB-I/O backbox. In retrofit applications, the station is UL Listed for use with the WP-10 backbox. It is intended for use with conventional control panels and has a set of single pole contacts and screw terminals.

### Mounting

The MS-7 interior stations may be surface mounted or semi-flush mounted on a standard double-gang, or 4-inch (10.2 cm) square electrical box. An optional trim ring (BG12TR) may also be used for semi-flush mounting.

### NYC-Plate

The NYC-Plate provides the backplate for the manual pull station. (See Figure 1).



Figure 1 NYC-Plate

## Specifications

<b>Material:</b>	Lexan®
<b>Contact Ratings:</b>	0.25 amps. @ 30 VAC/VDC (resistive)
<b>Dimensions:</b>	5 5/8" H x 4 1/4" W x 1 1/4" D (14 x 10.1 x 3.2 cm)
<b>Operating Temperature</b>	
<b>(MS-7AF, MS-7ASF):</b>	32° to 120° F (0° to 49° C)
<b>(MS-7LOB):</b>	-30° to 150° F (-35° to 66° C)
<b>Relative Humidity</b>	
<b>(MS-7AF, MS-7ASF):</b>	10 to 93% (non-condensing)
<b>(MS-7LOB):</b>	85% ± 5% @ 86° ± 3.6° (30° ± 2° C)
<b>Alarm Current:</b>	.0030 amp. 0.007 for LED
<b>Supervisory Current</b>	
<b>(MS-7AF, MS-7ASF):</b>	.00030 amps.

## Ordering Information

Part Number	Description
MS-7	Double action station
MS-7AF**	Velociti addressable double action station
MS-7ASF**	Velociti addressable single action station
MS-7S	Single action station, wire leads
MS-7SP	Double action station, English and Spanish instructions
MS-7LR	Agent release station, dual-action
MS-7LRA	Agent release station with abort switch, LED indicators, dual-action
MS-7LOB	Double action station, outdoor use (Includes SB-I/O - Indoor/outdoor use backbox)
SB-I/O	Indoor/outdoor use backbackbox
SB-10	Surface backbox
BG12TR	Trim ring for semi-flush mount, plastic
NY-PLATE	NYC backplate for manual pull station

\*\*For use with the Gamewell-FCI analog addressable control panels only.

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by Honeywell

# SpectrAlert® Advance Indoor Notification Appliances

## Description

The SpectrAlert® Advance Series speakers are UL® 464 Compliant for the 520 Hz low frequency signal and is compatible with the E3 Series® Voice Evacuation panels that use the AM-50 Series amplifiers. These speakers and speaker strobes are designed for ease of installation and to reduce ground faults. The plug-in construction allows the installer to pre-wire mounting plates and dress the wires before plugging in the speakers. The plastic cover prevents nicked wires by covering exposed speaker components.

This unique design allows faster installations that provide instant feedback to ensure that the following conditions are met.

- Wiring is properly connected.
- Rotary switches are set to the selected voltage and power settings.
- 11 field selectable candela settings are used for wall and ceiling speaker strobes.

The low total harmonic distortion of the SP model speaker offers high fidelity sound output. The SP model speaker maintains a low frequency alert tone (that is compatible with the E3 Series Voice System), and is compliant with the low frequency requirements defined in the UL Standard 464, Section 24.3

### SpectrAlert Advance makes installation easy

1. Attach a universal mounting plate to a 4" x 4" x 2-1/8" back box. Flush mount applications are achievable without the need for an extension ring.
2. Connect the notification appliance circuit or speaker wiring to the PEMS terminals on the mounting plate.
3. To attach the speaker or speaker strobe to the mounting plate, insert the product tabs into the mounting plate grooves.
4. Rotate the device into position to lock the product pins into the mounting plate terminals. The device will temporarily hold in place with a catch until it is secured with a captured mounting screw.

SpectrAlert® and E3 Series® are registered trademarks of Honeywell International Inc.  
UL® is a registered trademark of Underwriter's Laboratories Inc.

## 520 Hz Low Frequency, Selectable Output Speaker Strobes and Dual Voltage Evacuation Speakers



SpectrAlert Advance

## Features

- Complies with UL® Standard 464 for 520 Hz Low Frequency.
- Offers a plug-in design.
- Protective cover isolates speaker components, reduces ground faults.
- Electrical compatibility with existing SpectrAlert products
- Field selectable candela settings on wall & ceiling units:
  - Standard: 15, 15/75, 30, 75, 95, 110, 115
  - High: 135, 150, 177, 185
- Shorting spring on mounting plate tests continuity before installation.
- Rotary switch simplifies field selection of speaker voltage and power settings.
- Universal mounting plate for wall- & ceiling-mount units.
- Compatible with System Sensor synchronization protocol.
- SP model speakers offer high fidelity sound output.
- Automatic selection of 12 or 24 volt operation at 15 and 15/75 candela.
- No extension ring required.
- Includes a ceiling and a wall mount application.
- Optional tamper resistant Torx head screw included.

SIGNALING



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S4048

MEA

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10-08-E



7300-1653:201

Vol. 1, Sec. 2



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## Architectural/Engineering Specifications

### General

SpectrAlert Advance speaker and speaker strobes shall mount to a 4" x 4" x 2-1/8" (10.16 x 10.16 x 5.5 cm) backbox. A universal mounting plate shall be used for mounting ceiling and wall products. The notification appliance circuit and amplifier wiring shall terminate at the universal mounting plate. Indoor SpectrAlert Advance products shall operate between 32°F and 120°F from a regulated DC, or full-wave rectified, unfiltered power supply. Speaker strobes shall have field-selectable candela settings including 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, 185.

### Speaker

The speaker shall be a System Sensor SpectrAlert Advance model dual-voltage transformer speaker capable of operating at 25.0 or 70.7 nominal  $V_{RMS}$ . It should be listed to UL® 1480 and shall be approved for fire protective service. The speaker shall have a frequency range of 400 to 4000Hz and shall have an operating temperature between 32°F and 120°F. Speaker shall have power taps and voltage that are selected by rotary switches.

### Speaker Strobe Combination

The speaker strobe shall be a System Sensor SpectrAlert Advance model Listed to UL 1480 and UL 1971 and be approved for fire protective signaling systems. Speaker shall be capable of operating at 25.0 or 70.7 nominal  $V_{RMS}$  selected via rotary switch, and shall have a frequency range of 400 to 4000Hz. Speaker shall have power taps which are selected by rotary switch. The strobe shall comply with the NFPA 72 requirements for visible signaling appliances, flashing at 1Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system.

### Synchronization Module

The module shall be a System Sensor Sync Circuit model MDL listed to UL 464 and shall be approved for fire protective service. The module shall synchronize SpectrAlert strobes at 1Hz. The module shall mount to a 4-11/16" x 4-11/16" x 2-1/8" (10.4 x 10.4 x 5.5 cm) backbox. The module shall also control two Style Y (Class B) circuits or one Style Z (Class A) circuit. The module shall synchronize multiple zones. Daisy chaining two or more synchronization modules together will synchronize all the zones they control. The module shall not operate on a coded power supply.

UL Maximum Strobe Current Draw (mA RMS)					
	Candela	8 to 17.5 Volts		16 to 33 Volts	
		DC	FWR	DC	FWR
Standard Candela Range	15	123	128	66	71
	15/75	142	148	77	81
	30	NA	NA	94	96
	75	NA	NA	158	153
	95	NA	NA	181	176
	110	NA	NA	202	195
	115	NA	NA	210	205
High Candela Range	135	NA	NA	228	207
	150	NA	NA	246	220
	177	NA	NA	281	251
	185	NA	NA	286	258

Table 1: UL Maximum Strobe Current Draw (mA RMS)

Sound Output				
UL Reverberant (dBA @10 ft)	2 W	1 W	1/2 W	1/4 W
Wall Mount SP Series	86	83	80	77
Ceiling Mount SPC Series	86	83	80	77
Wall Mount SPS Series	85	82	79	76
Ceiling Mount SPSC Series	85	82	79	76

Table 2: Sound Output



## Specifications

### Physical Specifications

**Operating Temperature:** 32°F to 120°F (0°C to 49°C)

**Humidity Range:** 10 to 93% non-condensing

### Wall-Mount Dimensions:

**SP Speaker:** 6.0"L x 5.0"W x 2.8"D

**SPS Speaker/Strobe:** 6.0"L x 5.0"W x 4.7"D

### Ceiling-Mount Dimensions:

**SPC Speaker:** 6.8"Dia x 2.8"D

**SPSC Speaker/Strobe:** 6.8"Dia x 4.7"D

### Electrical/Operating Specifications:

**Nominal Voltage (speakers):** 25 Volts or 70.7 Volts (nominal)

### Maximum Supervisory

**Voltage (speakers):** 50VDC

**Strobe Flash Rate:** 1 flash per second

**Nominal Voltage (Strobes):** Regulated 12VDC/FWR or regulated 24VDC/FWR

### Operating Voltage Range (includes fire panels with built-in sync):

8 to 17.5V (12V nominal) or 16 to 33V (24 nominal)

### Operating Voltage with MDL Sync Module:

9 to 17.5V (12V nominal) or 17 to 33V (24V nominal)

**Frequency Range:** 400 to 4000Hz

**Power:** ¼, ½, 1, 2 watts

## Ordering Information

### Wall Mount

#### Part Number Description

**NOTE1:** Add -P to model number for plain housing (no 'FIRE' marking on the cover), e.g. SPSW-P.

**NOTE2:** (W) indicates white coloring; (R), red.

**SP(W)(R):** Speaker only (white/red)

**SPS(W)(R)\*:** Speaker strobe, selectable candela (15, 15/75, 30, 75, 95, 100, 115)

**SPS(W)(R)H\*:** Speaker strobe, selectable candela, high cd (135, 150, 177, 185)

**SPSR-P:** High fidelity speaker strobe (red)

**SPSRH-P:** Speaker strobe, high candela (red)

**SPSW-ALERT:** Speaker strobe, amber lens, ALERT, (white)

**SPSW-CLR-ALERT:** Speaker strobe, clear lens, ALERT, (white)

**SPSW-P:** Speaker strobe, plain, (red)

**SPSWH:** Speaker strobe, high candela, (white)

**SPSWH-P:** Speaker strobe, high candela, plain (red)

### Ceiling Mount

#### Part Number Description

**SPC(W)(R):** Speaker only

**SPSC(W\*)(R):** Speaker strobe, selectable candela (15, 15/75, 30, 50, 75, 95, 110, 115)

**SPSC(W\*)(R)H:** Speaker strobe, selectable candela, high cd (135, 150, 177, 185)

**SPSCW-CLR-ALERT:** Speaker strobe, clear lens, ALERT, (white)

**SPSCW-P:** Speaker strobe plain, (white)

**SPSCWH-P:** Speaker strobe, high candela, plain (white)

### Accessories

#### Part Number Description

**RFP:** Retrofit plate, red

**RFPW:** Retrofit plate, white

**SPBBSC:** Ceiling mount backbox skirt, red

**SPBBSCW:** Ceiling mount backbox skirt, white

**SPBBS:** Wall mount backbox skirt, red

**SPBBSW:** Wall mount backbox skirt, white

**TR:** Wall mount trim ring, red

**TRW:** Wall mount trim ring, white

**TRC:** Ceiling mount trim ring, red

**TRCW:** Ceiling mount trim ring, white

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by Honeywell

## Description

SpectrAlert® Advance selectable-output horns, strobes and horn/strobes are rich with features guaranteed to decrease installation times and maximize profits. The SpectrAlert Advance Series of notification appliances is designed to simplify your installations that offer the following features:

- Plug-in designs.
- Instant feedback messages to ensure correct installation of individual devices.
- Eleven field-selectable candela settings for wall, ceiling strobes and horn/strobes.

## Installation

More specifically, to install the Advance products, do the following:

1. Attach a universal mounting plate to a four-inch square, four-inch octagon, or double-gang junction box.  
The two-wire mounting plate attaches to a single-gang junction box.
2. Connect the notification appliance circuit wiring to the SEMS terminals on the mounting plate.
3. To attach the horn, strobe, or horn/strobe to the mounting plate, insert the product's tabs in the mounting plate's grooves.
4. Rotate the device into position, locking the product's pins into the mounting plate's terminals.
5. The device temporarily holds in place with a catch until you secure it with a captured mounting screw.

**SpectrAlert Advance products offer the following options:**

- 12 or 24 volts.
- At 24 volts, 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, or 185 candela by way of rear-mounted slide switch and front viewing window.
- Horn tones and volume by way of rotary switch.

The SpectrAlert Advance series includes outdoor notification appliances. Outdoor strobes and horn/strobes (two-wire and four-wire) are available for wall or ceiling. Outdoor horns are available for wall only. All System Sensor outdoor products are rated between -40°F and 151°F (-40°C and 66°C) in wet or dry applications.

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## Selectable Output Notification Appliances

7087pho1.jpg



Indoor Ceiling Horn/Strobe

7087pho2.jpg



Outdoor Ceiling Strobe

7087pho3.jpg



Indoor Wall Horn/Strobe

7087pho4.jpg



Indoor Ceiling Strobe

7087pho5.jpg



Indoor Wall Horn

7087pho6.jpg



Outdoor Wall Strobe

## Features

- Provides a plug-in design.
- Comprises an assortment of outdoor wall and ceiling products.
- Has tamper-resistance capability with minimal intrusion into the backbox.
- Offers the same mounting plate for wall- and ceiling-mount units.
- Includes a shorting spring on the mounting plate for a continuity check before installation and a captive mounting screw.
- Field-selectable candela settings on wall or ceiling units: 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, 185.
- Contains an automatic selection of 12 or 24 volt operation at 15 and 15/75 candela.
- Outdoor products rated from -40°F and 151°F (-40°C and 66°C).
- Horn rated at 88+ dbA at 16 volts.
- Provides a rotary switch for tone selection.
- Offers three horn volume settings.
- Electrically compatible with SpectrAlert® products.

SIGNALING



MEA  
Approved  
FDNY



452-05-E 7125-1653:0188

#### Available Models:

- Indoor wall-mount: horn, strobe, 2-wire horn/strobe, 4-wire horn/strobe.
- Indoor ceiling-mount: strobe, 2-wire horn/strobe, 4-wire horn/strobe.
- Outdoor wall-mount: horn, strobe, 2-wire horn/strobe, 4-wire horn/strobe.
- Outdoor ceiling-mount: strobe, 2-wire horn/strobe, 4-wire horn/strobe.

#### Engineering Specifications

SpectrAlert Advance horns, strobes, and horn/strobes shall mount on a standard 4.0" x 4.0" x 1.5" (10.16 x 10.16 x 3.81 cm) backbox, 4.0" (10.16 cm) octagonal backbox, or a double-gang backbox. Two-wire products shall also mount on a single-gang 2.0" x 4.0" x 1.875" (5.08 x 10.16 x 4.763 cm) backbox. A universal mounting plate shall be used for mounting ceiling and wall products. The notification appliance circuit wiring shall terminate at the universal mounting plate. Also, SpectrAlert Advance products, when used with the Sync•Circuit™ Module accessory, shall be powered from a non-coded notification appliance circuit output and shall operate on a nominal 12 or 24 volts. When used with the Sync•Circuit Module, 12-volt rated notification appliance circuit outputs shall operate between 9 and 17.5 volts; 24-volt rated notification appliance circuit outputs shall operate between 17 and 33 volts. Indoor SpectrAlert Advance products shall operate between 32°F and 120°F (0°C and 49°C) from a regulated DC, or full-wave-rectified, unfiltered power supply. Strobes and horn/strobes shall have field-selectable candela settings including 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, 185.

#### Strobe

The strobe shall be a System Sensor SpectrAlert Advance Model \_\_\_\_\_ Listed to UL STD 1971 and shall be approved for fire protective service. The strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system.

#### Horn/Strobe Combination

The horn/strobe shall be a System Sensor SpectrAlert Advance Model \_\_\_\_\_ Listed to UL Standards 1971 and 464 and shall be approved for fire protective service. The horn/strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system. The horn shall have three audibility options and an option to switch between a Temporal 3 pattern and a Non-Temporal (continuous) pattern. These options are set by a multiple position switch. On four-wire products, the strobe shall be powered independently of the sounder. The horn on horn/strobe models shall operate on a coded or non-coded power supply.

#### Outdoor Products

SpectrAlert Advance outdoor horns, strobes and horn/strobes shall be listed for outdoor use by UL and shall operate between -40°F and 151°F (-40°C and 66°C). The products shall be listed for use with a System Sensor outdoor/weatherproof backbox with half-inch and three-fourths-inch conduit entries.

#### Synchronization Module

The module shall be a System Sensor Sync•Circuit \_\_\_\_\_ Listed to UL STD 464 and shall be approved for fire protective service. The module shall synchronize SpectrAlert strobes at 1 Hz and horns at Temporal 3. Also, while operating the strobes, the module shall silence the horns on horn/strobe models over a single pair of wires. The module shall mount to a 4.688" x 4.688" x 2.125" (11.906 x 11.906 x 5.398 cm) backbox. The module shall also control two Style Y (Class B) circuits or one Style Z (Class A) circuit. The module shall synchronize multiple zones. Daisy-chaining two or more synchronization modules together will synchronize all the zones the modules control. The module shall not operate on a coded power supply.

#### Operating Specifications

##### Standard operating

**temperature:** 32° F to 120° F (0° C to 49° C)

##### K Series operating

**temperature:** -40° F and 151° F  
(-40° C and 66° C)

**Humidity range:** 10% to 93% non-condensing  
(indoor products).

**Strobe flash rate:** 1 flash per second.

**Nominal voltage:** regulated 12 VDC/FWR or regulated 24 VDC.FWR.

**Note:** Full Wave Rectified (FWR) voltage is a non-regulated, time-varying power source that is used on some power supply and panel outputs.

##### Operating voltage

**range:** 8 V to 17.5 V (12 V nominal); or 16 V to 33 V (24 V nominal).

**Note:** P, S, PC, and SC products will operate at 12 V nominal only for 15 cd and 15/75 cd.

##### Input terminal wire

**gauge:** 12 to 18 AWG (3.31 to 0.821 mm<sup>2</sup>).

##### Ceiling-mount

##### dimensions

**(including lens):** 6.8" diameter x 2.5" deep  
(17.3 diameter x 6.4 deep cm)

##### Wall-mount

##### dimensions

**(including lens):** 5.6" H x 4.7" W x 2.5" D

**(including lens):** (14.2 H x 11.9 W x 6.4 D cm)

**Horn dimensions:** 5.6" H x 4.7" W x 1.3" D

(14.2 H x 11.9 W x 3.3 D cm)

#### GAMEWELL-FCI

**Strobe Current Draw, UL Maximum (mA RMS)**

		8 - 17.5 V		16 - 33 V	
Candela		DC	FWR	DC	FWR
<b>Standard Candela Range</b>	15	123	128	66	71
	15/75	142	148	77	81
	30	NA	NA	94	96
	75	NA	NA	158	153
	95	NA	NA	181	176
	110	NA	NA	202	195
	115	NA	NA	210	205
<b>High Candela Range</b>	135	NA	NA	228	207
	150	NA	NA	246	220
	177	NA	NA	281	251
	185	NA	NA	286	258

**Horn Current Draw, UL Maximum (mA RMS)**

Sound Pattern	dB	8 - 17.5 V		16 - 33 V	
		DC	FWR	DC	FWR
Temporal	High	57	55	69	75
Temporal	Medium	44	49	58	69
Temporal	Low	38	44	44	48
Non-temporal	High	57	56	69	75
Non-temporal	Medium	42	50	60	69
Non-temporal	Low	41	44	50	50
Coded	High	57	55	69	75
Coded	Medium	44	51	56	69
Coded	Low	40	46	52	50

**Horn and Horn/Strobe Rotary Switch Setting**

Setting	Repetition Rate	dB Level
1	Temporal Horn	High
2	Temporal horn	Medium
3	Temporal horn	Low
4	Normal horn	Low
5	Normal horn	Medium
6	Normal horn	Low
7*	Externally coded	High
8*	Externally coded	Medium
9*	Externally coded	Low

**\*NOTE:** Settings 7, 8 and 9 are not available on 2-wire horn/strobe

**Horn and Horn/Strobe Output (dBA)**

Switch Position	Sound Pattern	dB	8 - 17.5 V		16 - 33 V	
			DC	FWR	DC	FWR
1	Temporal	High	78	78	84	84
2	Temporal	Medium	74	74	80	80
3	Temporal	Low	71	73	76	76
4	Non-temporal	High	82	82	88	88
5	Non-temporal	Medium	78	78	85	85
6	Non-temporal	Low	75	75	81	81
7*	Coded	High	82	82	88	88
8*	Coded	Medium	78	78	85	85
9*	Coded	Low	75	75	81	81

**\*NOTE:** Settings 7, 8, and 9 are not available on 2-wire horn/strobe.

<b>Two-Wire Horn/Strobe, STANDARD Candela Range (15 - 115 cd), UL Maximum Current Draw (mA RMS)</b>									
<b>Input, Sound Pattern, dB Level</b>	<b>8 - 17.5 V</b>				<b>16 - 33 V</b>				
	<b>15</b>	<b>15/75</b>	<b>15</b>	<b>15/75</b>	<b>30</b>	<b>75</b>	<b>95</b>	<b>110</b>	<b>115</b>
DC Input, Temporal High	137	147	79	90	107	176	194	212	218
DC Input, Temporal, Medium	132	144	69	80	97	157	182	201	210
DC Input, Temporal, Low	132	143	66	77	93	154	179	198	207
DC Input, Non-temporal, High	141	152	91	100	116	176	201	221	229
FWR Input, Non-temporal Medium	133	145	75	85	102	163	187	207	216
DC Input, Non-temporal, Low	131	144	68	79	96	156	182	201	210
FWR Input, Temporal, High	136	155	88	97	112	168	190	210	218
FWR Input, Temporal, Medium	129	152	78	88	103	160	184	202	206
FWR Input, Temporal, Low	129	151	76	86	101	160	184	194	201
FWR Input, Non-temporal, High	142	161	103	112	126	181	203	221	229
FWR Input, Non-temporal, Medium	134	155	85	95	110	166	189	208	216
FWR Input, Non-temporal, Low	132	154	80	90	105	161	184	202	211

<b>Two-Wire Horn/Strobe, HIGH Candela Range (135 - 185 cd), UL Maximum Current Draw (mA RMS)</b>									
<b>DC Input</b>	<b>16 - 33 V</b>				<b>FWR Input</b>	<b>16 - 33 V</b>			
	<b>135</b>	<b>150</b>	<b>177</b>	<b>185</b>		<b>135</b>	<b>150</b>	<b>177</b>	<b>185</b>
DC, Temporal High	245	259	290	297	FWR, Temporal, High	215	231	258	265
DC, Temporal Medium	235	253	288	297	FWR, Temporal, Medium	209	224	250	258
DC, Temporal Low	232	251	282	292	FWR, Temporal, Low	207	221	248	256
DC, Non-temporal, High	255	270	303	309	FWR, Non-temporal, High	233	248	275	281
DC, Non-temporal, Medium	242	259	293	299	FWR, Non-temporal, Medium	219	232	262	267
DC, Non-temporal, Low	238	254	291	295	FWR, Non-temporal, Low	214	229	256	262

### Ordering Information:

<b>Model</b>	<b>Description</b>	<b>Model</b>	<b>Description</b>
<b>WALL HORNS/STROBES</b>		<b>CEILING HORN/STROBES</b>	
<b>P2R</b>	2-wire horn/strobe, standard cd, red.	<b>PC2R</b>	2-wire horn/strobe, standard cd, red.
<b>P2RH</b>	2-wire horn/strobe, high cd, red.	<b>PC2RH</b>	2-wire horn/strobe, high cd, red.
<b>P2RK</b>	2-wire horn/strobe, standard cd, red, outdoor.	<b>PC2RK</b>	2-wire horn/strobe, standard cd, red, outdoor.
<b>P2RHK</b>	2-wire horn/strobe, high cd, red, outdoor (includes backbox).	<b>PC2RHK</b>	2-wire horn/strobe, high cd, red, outdoor.
<b>P2W</b>	2-wire horn/strobe, standard cd, white.	<b>PC2W</b>	2-wire horn/strobe, standard cd, white.
<b>P2WH</b>	2-wire horn/strobe, high cd, white.	<b>PC2WH</b>	2-wire horn/strobe, high cd, white.
<b>P2WK</b>	2-wire horn/strobe, standard cd, white, outdoor, (includes backbox).	<b>PC4R</b>	4-wire horn/strobe, standard cd, red.
<b>P4R</b>	4-wire horn/strobe, standard cd, red.	<b>PC4RH</b>	4-wire horn/strobe, high cd, red.
<b>P4RH</b>	4-wire horn/strobe, high cd, red.	<b>PC4RK</b>	4-wire horn/strobe, standard cd, red, outdoor, (ceiling mount).
<b>P4RK</b>	4-wire horn/strobe, standard.	<b>PC4RHK</b>	4-wire horn/strobe, high cd, red, outdoor.
<b>P4RHK</b>	4-wire horn/strobe, high cd, red, outdoor.	<b>PC4W</b>	4-wire horn/strobe, standard cd, white.
<b>P4W</b>	4-wire horn/strobe, standard cd, white.	<b>PC4WH</b>	4-wire horn/strobe, high cd, white.
<b>P4WH</b>	4-wire horn/strobe, high cd, white.		
<b>WALL STROBES</b>		<b>CEILING STROBES</b>	
<b>SR</b>	Strobe, standard cd, red.	<b>SWHK</b>	Strobe, high cd, white, outdoor.
<b>SRH</b>	Strobe, high cd, red.	<b>SCR</b>	Strobe, standard cd, red.
<b>SRK</b>	Strobe, standard cd, red, outdoor.	<b>SCRH</b>	Strobe, high cd, red.
<b>SRHK</b>	Strobe, high cd, red, outdoor.	<b>SCRK</b>	Strobe, standard cd, red, outdoor.
<b>SW</b>	Strobe, standard cd, white.	<b>SCRHK</b>	Strobe, high cd, red, outdoor.
<b>SWH</b>	Strobe, high cd, white.	<b>SCW</b>	Strobe, standard cd, white.
<b>SWK</b>	Standard, white, outdoor	<b>SCHW</b>	Strobe, high cd, white.
<b>SPEAKER STROBES/HORNS</b>			
<b>SPSCWV-P</b>	Unmarked Speaker Strobe, ceiling-mount, standard candela, high dBA, white.	<b>SPWK</b>	Outdoor Speaker, includes backbox, wall-mounted, white.
<b>SPSR-P</b>	Unmarked Speaker Strobe, indoor, wall-mounted, standard candela, red.	<b>SR-P</b>	Unmarked Horn, wall-mounted, standard candela, red.
<b>SPSR-P</b>	Unmarked Speaker Strobe, indoor, wall-mounted, standard candela dBA, red.		
<b>ACCESSORIES</b>		<b>HORNS</b>	
<b>SBBR</b>	Backbox skirt, wall, red.	<b>HR</b>	Horn, red.
<b>SBBW</b>	Backbox skirt, wall, white.	<b>HRK</b>	Horn, red, outdoor.
<b>SBBCR</b>	Backbox skirt, ceiling, red.	<b>HW</b>	Horn, white.
<b>SBBCW</b>	Backbox skirt, ceiling, white.		

**NOTE:** "High cd" refers to strobes that include 135, 150, 177, and 185 candela settings. "Standard cd" refers to strobes that include 15, 15/75, 30, 75, 95, 110, and 115 candela settings.

#### GAMEWELL-FCI



by Honeywell

# SpectrAlert® Advance Outdoor Notification Appliances

## Description

The SpectrAlert® Advance series offers the broadest line of outdoor speakers and speaker strobes in the industry. From metal and plastic outdoor back boxes, to white and red plastic housings, to wall and ceiling mounting options, virtually every application is covered. SpectrAlert Advance outdoor speakers and speaker strobes offer reliable operation over the entire temperature range of -40°F to 151°F. They may be used indoors or outdoors in wet or dry applications. In addition, these speakers provide a broad frequency response range and low harmonic distortion to provide an accurate and intelligible broadcast of evacuation messages. High sound pressure level at all tap settings ensures that messages are clearly heard.

The plug-in design allows the installer to pre-wire mounting plates and dress the wires before plugging in the speakers to help reduce ground faults. This design also allows faster installations with instant feedback to ensure that wiring is properly connected, rotary switches to select voltage and power settings, and field selectable candela settings for wall and ceiling speaker strobes.

The weatherproof back boxes have plastic and metal versions. They are designed to accommodate in-and-out wiring for daisy chaining outdoor devices. The plastic weatherproof back boxes are shipped with the product feature removable side flanges and have improved resistance to salt water corrosion. The screw hole knockouts, located on the back of the weatherproof back box, eliminate the need to drill holes for screw-in mounting. Both weatherproof back boxes are available with 3/4 inch top and bottom conduit entries and 3/4 inch knock-outs at the back. Included with each back box is a screw-in NPT plug with an O-ring gasket for a watertight seal. Metal back boxes are available separately.

## Outdoor Selectable Output Speaker Strobes and Dual Voltage Evacuation Speakers



SpectrAlert Advance

## Features

- Plug-in design
- Electrical compatibility with existing SpectrAlert products
- Shorting spring on mounting plate tests continuity before installation
- Rotary switch simplifies field selection of speaker voltage and power settings
- Universal mounting plate for wall- and ceiling-mount units
- Weatherproof per NEMA 4x, IP56
- Compatible with System Sensor synchronization protocol
- Automatic selection of 12- or 24-volt operation at 15 and 15/75 candela
- Field selectable candela settings on wall and ceiling units
- Ceiling and wall mount application

An ISO 9000-2000 Company



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### GAMEWELL-FCI

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## Architectural/Engineering Specifications

### General

SpectrAlert Advance outdoor speaker and speaker strobes shall mount to a weatherproof back box. A universal mounting plate shall be used for mounting ceiling and wall products. The notification appliance circuit and amplifier wiring shall terminate at the universal mounting plate. Outdoor SpectrAlert Advance products shall operate between -40°F and 151°F from a regulated DC, or full-wave rectified, unfiltered power supply.

### Speaker

The Speaker shall be a System Sensor SpectrAlert Advance Model \_\_\_\_\_ dual voltage transformer speaker capable of operating at 25.0 or 70.7 nominal Vrms. Speaker shall be Listed to UL® Standard S4048 for outdoor fire protective signaling systems. Speaker shall have a frequency range of 400 to 4000 Hz and shall have an operating temperature from -40°F to 150.8°F. Speaker shall have power taps and wattage settings which are selected by rotary switches. The speaker must be installed with its weatherproof backbox in order to remain outdoor approved per UL listing S4048. The speaker shall be suitable for use in air handling spaces, as well as wet environments.

### Speaker Strobe Combination

The Speaker Strobe shall be a System Sensor Model \_\_\_\_\_ listed to UL 1638 and UL 1480 and be approved for fire protective signaling systems. Speaker shall be capable of operating at 25.0 or 70.7 nominal Vrms, and shall have a frequency range of 400 to 4000 Hz. Speaker shall have power taps that are selected by rotary switch. The strobe shall consist of a xenon flash tube with associated lens/reflector system and operate on either 12V or 24V. The strobe shall also feature selectable candela output, providing options for 15 or 15/75 candela when operating on 12V and 15, 15/75, 30, 75, 110, 115, 135, 150, 177 or 185 when operating on 24V. The strobe shall comply with the Americans with Disabilities Act requirement for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The speaker strobe must be installed with its weatherproof back box in order to remain outdoor approved per UL. The speaker strobe shall be suitable for use in wet environments.

Sound Output				
UL Reverberant (dBA@10 ft)	2 W	1 W	1/2 W	1/4 W
Outdoor Speaker	90	87	84	81
Outdoor Speaker/Speaker Strobe	89	86	83	80

UL Maximum Strobe Current Draw (mA RMS)					
	Candela	8 to 17.5 Volts		16 to 33 Volts	
		DC	FWR	DC	FWR
Standard Candela Range	15	123	128	66	71
	15/75	142	148	77	81
	30	NA	NA	94	96
	75	NA	NA	158	153
	vmvm95	NA	NA	181	176
	110	NA	NA	202	195
	115	NA	NA	210	205
High Candela Range	135	NA	NA	228	207
	150	NA	NA	246	220
	177	NA	NA	281	251
	185	NA	NA	286	258

## Candela Derating

NOTE: For K series products used at low temperatures, listed candela ratings must be reduced in accordance with this table.

Strobe Output (cd)	
Listed Candela	Candela Rating at -40 F
15	Do not use below 32 F
15/75	
30	
75	44
95	70
110	110
115	115
135	135
150	150
177	177
185	185

### GAMEWELL-FCI

## Specifications

### Physical Specifications

<b>Operating Temperature:</b>	-40°F to 151°F (-40°C to 66°C)
<b>Wall-Mount Dimensions:</b>	
<b>SPS Speaker Strobe:</b>	6.0"L x 5.0"W x 4.9"D (including lens and speaker)
<b>SP Speaker:</b>	6.0"L x 5.0"W x 2.9"D
<b>Ceiling Mount Dimensions:</b>	
<b>SPS Speaker Strobe:</b>	6.8"Dia x 4.8"D (including lens and speaker)
<b>SP Speaker:</b>	6.8"L x 2.9"D
<b>Wall-Mount Weatherproof Backbox:</b>	
<b>Dimensions:</b>	6.5"L x 5.5"H x 2.9"D
<b>Ceiling-Mount Weatherproof Backbox:</b>	
<b>Dimensions:</b>	7.2"Dia x 2.9"D

### Electrical/Operating Specifications:

<b>Nominal Voltage (speakers):</b>	25 Volts or 70.7 Volts (nominal)
<b>Maximum Supervisory Voltage (speakers):</b>	50VDC
<b>Strobe Flash Rate:</b>	1 flash per second
<b>Nominal Voltage (Strobes):</b>	Regulated 12VDC/FWR or 24VDC/FWR
<b>Operating Voltage Range (includes fire panels with built-in sync):</b>	8 to 17.5V (12V nominal) or 16 to 33V (24 nominal)
<b>Operating Voltage with MDL Sync Module:</b>	9 to 17.5V (12V nominal) or 17 to 33V (24V nominal)
<b>Frequency Range:</b>	400 to 4000Hz
<b>Power:</b>	¼, ½, 1, 2 watts

## Ordering Information

### Part Number Description

<b>SPWK:</b>	Wall mount outdoor speaker; white
<b>SPRK:</b>	Wall mount outdoor speaker; red
<b>SPSWK:</b>	Wall mount outdoor speaker strobe, selectable candela (15, 15/75, 30, 75, 95, 100, 115); white
<b>SPSRK:</b>	Wall mount outdoor speaker strobe, selectable candela (15, 15/75, 30, 75, 95, 100, 115); red
<b>SPCWK:</b>	Ceiling mount outdoor speaker; white.
<b>SPSCWK:</b>	Ceiling mount outdoor speaker strobe, selectable candela (15, 15/75, 30, 50, 75, 95, 110, 115); white
<b>SPSCWHK:</b>	Ceiling mount outdoor speaker strobe, selectable candela, high cd (135, 150, 177, 185); white

### Accessories

<b>MWBB:</b>	Wall, metal weatherproof backbox; red
<b>MWBBW:</b>	Wall, metal weatherproof backbox; white
<b>MWBBCW:</b>	Ceiling, metal weatherproof backbox; white
<b>PWBB:</b>	Wall, plastic weatherproof backbox; red
<b>PWBBW:</b>	Wall, plastic weatherproof backbox; white
<b>PWBBCW:</b>	Ceiling, plastic weatherproof backbox; white

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by Honeywell

# Velociti<sup>®</sup> Series

## ATD-L2F, ATD-RL2F

### Description

The Gamewell-FCI Velociti<sup>®</sup> Series, addressable plug-in thermal sensors with integral communication provide features that surpass conventional sensors. Point ID capability allows each sensor's address to be set, providing exact locations for pinpointing alarm locations and for selective maintenance. ATD thermal sensors use an innovative thermistor sensing circuit to produce 135°F/57°C fixed-temperature (ATD-L2F). The ATD-RL2F provides a combination 15°/minute rate-of-rise with 135° fixed thermal detection that is included in a low-profile package. The ATD-HL2F provides fixed high-temperature detection at 190°F/88°C. These thermal sensors provide cost-effective, addressable property protection in a variety of applications.

The Velociti<sup>®</sup> Series uses a communication protocol that substantially increases the speed of communication between the sensors and Gamewell-FCI analog addressable fire alarm controls. These devices operate in a grouped fashion. If one of the devices in the group has a status change, the panel's microprocessor stops the group poll and identifies the single device with the status change. The net effect is response speed up to five times greater than earlier designs.

### Installation

ATD plug-in sensors use a separate base to simplify installation, service, and maintenance. A special tool allows maintenance personnel to plug-in and remove sensors without using a ladder.

Mount the base on a box which is at least 1.5" (3.8 cm) deep. Suitable mounting base boxes include:

- 4.0" (10.2 cm) square box.
- 3.5" (8.9 cm) or 4.0" (10.2 cm) octagonal box.
- Single-gang box (except relay or isolator base).
- With B200S or B200SR base, mounted on a 4.0" (10.2 cm) octagonal or square box.
- With B224RB or B224BI base, mounted on a 3.5" (8.9 cm) octagonal box, or a 4.0" (10.2 cm) octagonal or square box.

**NOTE:** Because of the inherent supervision provided by the SLC, end-of-line resistors are not required. Wiring "T-taps" or branches are permitted for Style 4 (Class "B") wiring.

Velociti<sup>®</sup> and E3 Series<sup>®</sup> are registered trademarks of Honeywell International Inc.

UL is a registered trademark of Underwriters Laboratories Inc.

ULC is a registered trademark of Underwriters Laboratories Canada Inc.

### Addressable Thermal Sensor



ATD-L2F

### Features

- Sleek, low-profile design
- Visual rotary switch addressing
- Built-in functional test switch activated by an external magnet
- Bicolor LEDs flash green whenever the sensor is addressed, and light steadily red on alarm\*
- Optional relay, isolator, or sounder bases
- Low standby current
- Addressable communication
- Stable communication technique with noise immunity
- Optional remote, single-gang LED accessory (RA-100Z)
- Suitable for installation in ducts

Note: \*Only the red LED is operative in panels that do not operate in Velociti<sup>®</sup> mode.

An ISO 9001-2000 Company

SIGNALING



MEA Approved



S2332 3023594 219-02-E Vol.VI 7270-1703:0115

### GAMEWELL-FCI

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## Specifications

### ATD-L2F/ATD-RL2F

**Dimensions:** 2.1" (5.3 cm) Height  
4.1" (10.4 cm) diameter installed in the B501 base  
6.1" (15.5 cm) diameter installed in the B210LP base

**Shipping Weight:** 4.8 oz. (137 g)

### Operating

#### Temperature:

**ATD-L2F or ATD-RL2F** -4° F to 100° F (-20° C to 38°C)  
**ATD-HL2** -4° F to 150°F (-20 C to 66°C)

**Sensor Spacing:** UL<sup>®</sup> approved for 50 ft. (15.2 m) center to center  
FM approved for 25 x 25 ft. (7.6 x 7.6 m) spacing

**Relative Humidity:** 10 – 93% (non-condensing)

**ATD-L2F** Fixed-temperature setpoint 135°F (57°C)

**ATD-RL2F** Combination 135° F fixed temperature and 15° F(8.3°c)/per minute rate-of-rise°

**ATD-HL2F** Fixed-temperature setpoint 190°F (88°C)

## Electrical Specifications

**Voltage Range:** 15 - 32 Volts DC peak

**Standby Current:** 200 mA @ 24 VDC (without communication)

**(max. avg.)** .0003 A @ 24 VDC (one communication every 5 seconds with LED blink enabled)

**LED Current (max.)** .0065 A @ 24 VDC (LED lit)

## Specifications

### Bases and Options

**B501** Plug-in sensor base without flange

**Dimensions:** 4.1" (10.4 cm) diameter

**B210LP** Flanged mounting base

**Dimensions:** 6.1" (15.5 cm) diameter

**B210LPBP** Flanged mounting base bulk pack

**Dimensions:** 6.1" (15.5 cm) diameter

**B224RB** Plug-in sensor base with auxiliary relay, SPDT

2 coil latching relay 1 Form C contact UL/ CSA Rating:  
0.9 A @ 125 VAC (inductive)  
0.9 @ 110 VDC (inductive)  
3.A @ 30 VDC (resistive)

**Dimensions:** 6.1" (15.5 cm) diameter

**B224BI** Plug-in sensor isolator base for Style 7 operation

**Dimensions:** 6.1" (15.5 cm) diameter  
Maximum 25 devices between isolator bases

**B200S** Intelligent sensor sounder base

**Dimensions:** 6.875" (17.5 cm) diameter

**B200SR** Standard sounder base, UL 864 9th Edition compliant, ULC Listed

**Dimensions:** 6.875" (17.5 cm) diameter

**RA-100Z** Remote LED Annunciator

**BCK-200** Black detector covers (box of 10)

## Ordering Information

Part Number	Description
<b>ATD-L2F</b>	Addressable thermal sensor, fixed, 135° F
<b>ATD-RL2F</b>	Addressable thermal sensor, combination fixed, 135° F and 15°/minute rate-of-rise.
<b>ATD-HL2F</b>	Addressable thermal sensor, fixed, 190° F

### GAMEWELL-FCI