Fire Alarm System

CAÑADA COLLEGE Building 8, RETROFIT

4200 Farm Hill Boulevard Redwood City, California 94061

SHEET NO. SHEET COVER SHEET / DRAWING INDEX / EQUIPMENT LIST O1-COV.DWG MISCELLANEOUS DETAILS 02-MISC.DWG TYPICAL FIELD DEVICE WIRING DETAILS 03-WIRING.DWG BUILDING 8 MXL-R - MAIN FIRE ALARM CONTROL PANEL 04-B8 MXL.DWG FIRE ALARM RISER DIAGRAM 05-RISER.DWG FIRE ALARM PLAN - FIRST FLOOR AND SECOND FLOOR 06-BLDG 8.DWG		DRAWING INDEX	
2 MISCELLANEOUS DETAILS 3 TYPICAL FIELD DEVICE WIRING DETAILS 4 BUILDING 8 MXL-R - MAIN FIRE ALARM CONTROL PANEL 5 FIRE ALARM RISER DIAGRAM 02-MISC.DWG 03-WIRING.DWG 04-B8 MXL.DWG		SHEET CONTENTS	CAD FILENAME
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5 FIRE ALARM RISER DIAGRAM 05-RISER.DWG	3	TYPICAL FIELD DEVICE WIRING DETAILS	03-WIRING.DWG
	4	BUILDING 8 MXL-R - MAIN FIRE ALARM CONTROL PANEL	04-B8 MXL.DWG
6 FIRE ALARM PLAN - FIRST FLOOR AND SECOND FLOOR 06-BLDG 8.DWG	5	FIRE ALARM RISER DIAGRAM	05-RISER.DWG
	6	FIRE ALARM PLAN — FIRST FLOOR AND SECOND FLOOR	06-BLDG 8.DWG

CODE SUMMARY

APPLICABLE CODES:

2001 Building Standards Administrative Code, Part 1, Title 24

2001 California Building Code (CBC), Part 2, Title 24 C.C.R.

2001 California Electrical Code (CEC), Part 3, Title 24 C.C.R.

2001 California Mechanical Code (CMC), Part 4, Title 24 C.C.R. 2001 California Elevator Safety Construction Code, Part 7, Title

24 C.C.R. 2001 California Fire Code, Part 9, Title 24 C.C.R.

2001 California Reference Standards, Part 12, Title 24 C.C.R. 1990 Title 19 C.C.R., Public Safety, State Fire Marshal

APPLICABLE STANDARDS

Regulations

NFPA 72 National Fire Alarm Code (California Amended), 1999

(Note: See UL Standard 1971 for "Visual Devices")

MXL-R-FIRE ALARM SYSTEM WIRING GUIDELINES

1. ALL WIRING MUST COMPLY WITH LOCAL AND CALIFORNIA ELECTRICAL CODES. ALL WIRING MUST BE DONE AS DESCRIBED IN NOTES 2 & 6 BELOW, TO OBTAIN SAFE AND PROPER SYSTEM OPERATION.

2. EARTH GROUND THE MXL ENCLOSURE PROPERLY; SEE LATEST EDITION OF NATIONAL ELECTRICAL CODES FOR APPROVED

3. SEPARATE ALL WIRING FOR INITIATING DEVICES (i.e., DETECTORS, MANUAL STATIONS, TRI MODULES, ETC) FROM ALL OTHER

4. INSULATE ALL CABLE DRAIN WIRES FROM ANY CONDUIT OR OTHER EARTH GROUNDED ELECTRICAL BOX, INCLUDING THOSE

5. CONNECT SHIELD CABLE DRAIN WIRE ONLY AT SPECIFIED LOCATION INSIDE THE MXL ENCLOSURE.

6. EARTH GROUND ALL CONDUIT RUNS THROUGHOUT THE INSTALLATON.

7. LINE RESISTANCE IS MEASURED AT THE ALD-21 MODULE SCREW TERMINALS. THE END OF THE LOOP MUST BE SHORTED, THE ALD-21 MODULE MUST BE REMOVED FROM THE SCREW TERMINALS, AND NO ADDRESSABLE DEVICES MAY BE INSTALLED.

8. LINE CAPACITANCE IS MEASURED AT THE ALD-21 MODULE SCREW TERMINALS THE END OF THE LOOP(S) MUST BE OPEN. THE ALD-21 MODULE MUST BE REMOVED FROM THE SCREW TERMINALS AND NO ADDRESSABLE DEVICES MAY BE INSTALLED.

9. ALL 110/120 VAC CIRCUITS SHALL BE INSTALLED IN DEDICATED CONDUIT.

10. ALD-21 LOOP WIRING MUST NOT BE IN THE SAME CONDUIT AS CODED AUDIBLE WIRING.

11. ALL INITIATING CIRCUITS ARE RATED POWER LIMITED AND SHALL BE WIRED IN ACCORDANCE WITH APPLICABLE CODES.

12. UNDERGROUND WIRING IS PERMISSIBLE IF ALL NEC WIRING REQUIREMENTS ARE MET.

13. OVERHEAD OR EXTERIOR WIRING IS NOT RECOMMENDED.

BALLAST (LIGHTING FIXTURES).

GENERAL ELECTRICAL NOTES

1. ALL WIRING AND INSTALLATION MUST CONFORM WITH PROJECT SPECIFICATIONS, APPLICABLE CODE SUMARIES. DRAWINGS AND REQUIREMENTS ADOPTED BY NFPA.

2. SMOKE DETECTORS SHALL NOT BE INSTALLED WITHIN 3 FEET OF SUPPLY AIR OUTLETS OR RETURN AIR DIFFUSERS. 3. ALL SMOKE DETECTORS AND INITIATING DEVICES WIRING SHALL BE INSTALLED MINIMUM 3 FEET FROM ELECTRONIC

4. WHEN INSTALLING INITIATING AND NOTIFICATION DEVICES, POLARITY MUST BE OBSERVED.

5. ALL NOTIFICATION CIRCUIT WIRES MUST BE SUPERVISED. HENCE, NO PARALLEL BRANCHING OF WIRES IS PERMISSIBLE (T-TAPPING). ALL AUDIBLE SIGNALING DEVICES SHALL PRODUCE A DISTINCTIVE THREE-PULSE TEMPORAL TONE, AUDIBLE SIGNALS SHALL HAVE A SOUND LEVEL OF NOT LESS THAN 75dbA AT 10' OR AT LEAST 15dbA ABOVE THE AVERAGE AMBIENT SOUND LEVEL, WHICHEVER IS GRATER , BUT NOT MORE THAN 110dba AT THE MINIMUM HEARING DISTANCE FROM THE AUDIBLE APPLIANCE (PER NFPA 72 CH. 4. 1999 ED.) WHEN MORE THAN TWO (2) VISUAL DEVICES ARE IN THE SAME VIEWING PLANE THE VISUAL DEVICES SHALL BE SYNCHRONIZED AS REQUIRED BY NFPA 72 CH. 4, 1999 EDITION.

6. DO NOT INSTALL ADDRESSABLE DEVICES PRIOR TO PROGRAMMING. (SEE NOTE 15)

7. ALL 24 VDC WIRE TO BE INSTALLED IN DEDICATED CONDUIT SEPARATE FROM 120 VAC WIRING, IN ACCORDANCE WITH CURRENT NATIONAL AND STATE ELECTRICAL CODES.

8. CONDUIT SIZING TO BE DETERMINED BY THE ELECTRICAL CONTRACTOR AND SHALL CONFORM TO CONDUIT FILL CAPACITIES AS PER REQUIREMENTS OF CURRENT EDITIONS OF NATIONAL AND STATE ELECTRICAL CODES.

9. DO NOT APPLY 120 VAC POWER TO CONTROL PANEL UNTIL A SIEMENS FIRE SAFETY SERVICE TECHNICIAN HAS INSPECTED ALL SYSTEM WIRING CONNECTIONS AND HAS APPROVED THE SYSTEM TO BE TURNED ON.

10. ALL PLUG-IN TYPE DETECTORS REQUIRE A 4" OCTAGONAL, 1-1/2" OR DEEPER MOUNTING BOX. REFER TO DETAIL DRAWINGS FOR DEVICE WIRING AND MOUNTING CONDITIONS.

11. 120 VAC INPUT CONNECTIONS TO THE FIRE ALARM CONTROL PANEL LIGHT AND POWER SERVICE SHALL BE ON DEDICATED BRANCH CIRCUIT(S). THE CIRCUIT(S) AND CONNECTIONS SHALL BE MECHANICALLY PROTECTED, CIRCUIT DISCONNECTION MEANS SHALL HAVE A RED MARKING. SHALL BE ACCESSIBLE ONLY TO AUTHORIZED PERSONNEL. AND SHALL BE IDENTIFIED AS FIRE ALARM CIRCUIT CONTROL, THE LOCATION OF THE CIRCUIT DISCONNECTING MEANS SHALL BE PERMANENTLY IDENTIFIED AT THE FIRE ALARM CONTROL UNIT.

12. INSTALLATION MATERIALS SUCH AS CONDUITS, FITTINGS, JUNCTION BOXES, TERMINAL CABINETS, PULL BOXES, HANGERS, ETC. ARE SUPPLIED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. ALL WIRING IS TO BE FROM DEVICE TERMINAL TO DEVICE TERMINAL SPLICES AND WIRE NUTS ARE NOT ACCEPTABLE.

13. ANY DEVIATION FROM THE DESIGN AND LOCATION OF EQUIPMENT SHOWN MUST FIRST HAVE A WRITTEN APPROVAL FROM SIEMENS FIRE SAFETY. ANY DEVIATION FROM DESIGN MUST ALSO BE INDICATED ON SIEMENS FIRE SAFETY SHOP DRAWINGS (BLUEPRINTS) AND RETURNED TO SIEMENS FIRE SAFETY AT TIME OF JOB COMPLETION.

14. SHOWN IN THIS DRAWING SET IS SIEMENS FIRE SAFETY ENGINEERED FIRE ALARM SYSTEM PER CONTRACTUAL DESIGN DRAWINGS AND SPECIFICATIONS.

a) CONTRACTOR SHALL NOT DEVIATE BY NOT MORE THAN 5% FROM THE FINAL APPROVED SHOP DRAWINGS.

b) WIRE RUNS HAVE BEEN ENGINEERED TO COMPLY WITH SPECIFIC VOLTAGE DROP REQUIREMENTS. ANY DEVIATION FROM SHOWN WIRE RUNS WHICH RESULTS IN NONCOMPLIANCE WITH VOLTAGE DROP REQUIREMENTS SHALL BE THE SOLE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.

c) THESE SUBMITTED SHOP DRAWINGS ARE COMPLETE. SIEMENS FIRE SAFETY SHALL NOT BEAR ANY ADDITIONAL COSTS OF RE-ENGINEERING RECORD DRAWINGS (AS-BUILTS).

15. ALL SMOKE DETECTORS (NEW OR EXISTING) SHALL BE PROTECTED FROM DUST AND DEBRIS DURING CONSTRUCTION. SMOKE-SENSING DETECTORS SHALL NOT BE INSTALLED UNTIL AFTER THE CONSTRUCTION CLEANUP OF ALL TRADES IS COMPLETE AND FINAL. PER NFPA 72 (CHAPTER 2-6.3.1.3) 1999 EDITION.

Exception: WHERE REQUIRED BY THE AUTHORITY HAVING JURISDICTION FOR PROTECTION DURING CONSTRUCTION. DETECTORS THAT HAVE BEEN INSTALLED DURING CONSTRUCTION AND FOUND TO HAVE A SENSITIVITY OUTSIDE THE LISTED AND MARKED SENSITIVITY RANGE SHALL BE CLEANED OR REPLACED AT AN ADDITIONAL COST TO THE CONTRACTOR.

16. POWER SERVICES SHALL BE ON A DEDICATED BRANCH CIRCUIT WIT A RED MARKING AND IDENTIFIED AS "FIRE ALARM CIRCUIT CONTROL"

17. PROVIDE TEMPORAL-THREE DISTINCTIVE FIRE ALARM SOUND.

18. THE STROBE FLASH RATE SHALL NOT EXCEED TWO (2) FLASHES PER SECOND NOR BE LESS THAN ONE FLASH PER

19. FINAL FIRE ALARM TEST SHALL BE MADE WITH THE DSA INSPECTOR OF RECORD (IOR). LOCAL FIRE AUTHORITY SHALL BE NOTIFIED OF DATE AND TIME OF FINAL FIRE ALARM TESTING AND SHALL ASSIST/WITNESS SUCH TESTING WHEN ABLE.

20. FIRE ALARM CONTRACTOR SHALL PROVIDE A "RECORD OF COMPLETION" TO THE INSPECTOR OF RECORD (IOR)/DSA AFTER COMPLETION OF OPERATIONAL ACCEPTANCE TEST.

SCOPE OF WORK

PRESENTED HEREIN IS THE UPGRADED FIRE ALARM SYSTEM FOR THE BUILDING 8 REMODEL PROJECT, AS DESIGNED BY INTERFACE ENGINEERING AND APPROVED BY DSA.

BUILDING CONDITIONS

PROJECT LOCATION: CANADA COLLEGE

4200 FARM HILL DRIVE REDWOOD CITY, CALIFORNIA 94061

BUILDING OWNER: SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT 3401 CSM DRIVE SAN MATEO, CA 94402 TEL. 650-574-6512

110.						NUMBER	LISTING NUMBER
1			MME-KIT	MXLR MEDIUM STANDARD ENCLOSURE	SIEMENS	5056	7300-0067:172
2			MDB-1	SHEET METAL BLANK (LOWER DOOR OPENING)	SIEMENS	5056	7300-0067:172
				·			
3			PSR-1	REMOTE POWER SUPPLY	SIEMENS	5010	7170-0067:154
4			NET-7	NETWORK INTERFACE CARD (CLASS A)	SIEMENS	5012	7170-0067:154
5			MOM-4	OPTION MODULE CARD CAGE	SIEMENS	5004	7300-0067:172
6			ALD-2I	ANALOG LOOP DRIVER MODULE	SIEMENS	5036	7300-0067:172
7			MPS-12	POWER SUPPLY w/ TRANSFORMER, 12 AMPS	SIEMENS	5035	7170-0067:154
8	FARP		UB12550	55 AMP/HOUR BATTERIES	UNIVERSAL	whomen status	Not Applicable
9		1	CP2341	SURGE SUPPRESSOR	SIEMENS	**************************************	7300-0067:172
10		Queens Y	CSM-4	CONTROLLABLE SIGNAL MODULE	SIEMENS	5001	7165-0067:144
11		decemb	MKB-2	MXL DISPLAY/KEYBOARD	SIEMENS	5026	7165-0067:144
12		q.	MHD-1	DEAD FRONT PANEL	SIEMENS	5056	7300-0067:172
13		ų damana	MDL-1	CLEAR PLEXIGLAS LENS	SIEMENS	5056	
14		4	MHD-2	DEAD FRONT PANEL	SIEMENS	5056	7300-0067:172
15		Africano	BB-55	BATTERY CABINET	SIEMENS	ORDERS MARRIE - MARRIE	7300-0067:172
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17							
18							
		_	DO 12.12	DOWED DOOGTED TOWN	1111 1 mm m		mg mg 1 2m - A
19		3	PS-12/24-8MP	POWER BOOSTER POWER SUPLY	WHEELOCK	***************************************	7315-0785:162
20	NAC	6	UB1270	7 AMP/HOUR BATTERY, 12 VDC	UNIV BATT		Not Applicable
21							
22		0	PLM-35	POWER-LIMITING MODULE	SIEMENS	375000 \$111000 3111101	
23	(A)		RCC-1F			5039	7300-0067:152
		0	NOO-IF	FIRE COMMAND CENTER/ANNUNCIATOR, FLUSH MOUNTED	SIEMENS	JUJ9	7500-006/:152
24							
25				NEW DEVICES			
26		2	FP-11	INTELLIGENT PHOTOELECTRIC SMOKE DETECTOR	SIEMENS	6175	7272-0067:203
27	<u> </u>	2	AD2-XHR	DUCT DETECTOR HOUSING & RELAY	SIEMENS	6178	3240-0067:245
	<u>©</u>		ST-50	DUCT DETECTOR NOUSING & RELAT	SIEMENS	6185	0007.270
28	_	2					
30	F	5	MSI-10B	INTELLIGENT MANUAL PULL STATION	SIEMENS	6187	7150-0067:036
31							
32				MULTI CANDELA WALL MOUNTED HORN/STROBE, 15 Candela	WHEELOCK		7125-0785:142
33	<u> [-</u>			MULTI CANDELA WALL MOUNTED HORN/STROBE, 30 Candela	WHEELOCK		7125-0785:142
34	F 4 -, ⁷⁵ F 4	6	NS-24MCW-FR				
	F 4 1 110			MULTI CANDELA WALL MOUNTED HORN/STROBE, 75 Candela	WHEELOCK		7125-0785:142
35	110 F₄			MULTI CANDELA WALL MOUNTED HORN/STROBE, 110 Candela	WHEELOCK		7125-0785:142
36	- ↓ -15 F			MULTI CANDELA WALL-MOUNTED STROBE, 15 Candela	WHEELOCK		7125-0785:141
37	- J -30			MULTI CANDELA WALL-MOUNTED STROBE, 30 Candela	WHEELOCK		7125-0785:141
38	<u>↓</u> 75	8	RSS-24MCW	MULTI CANDELA WALL-MOUNTED STROBE, 75 Candela	WHEELOCK		7125-0785:141
		1				_	
39	- J 110 F			MULTI CANDELA WALL-MOUNTED STROBE, 110 Candela	WHEELOCK		7125-0785:141
40	툿	1	AH-24-R	HORN, 24VDC (Red) Wall Mtd.	WHEELOCK		7125-0785:131
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FIRE ALARM EQUIPMENT LIST

DESCRIPTION

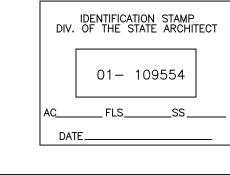
CATE | ITEM | SYMBOL |

IS DRAWING AND DESIGNS THEREON SHALL NOT BE DUPLICATED USED OR DISCLOSED TO OTHERS FOR PROCUREMENT OR OTHER PURPOSE (EXCEPT AS OTHERWISE AUTHORIZED BY CONTRACT) WITHOUT WRITTEN PERMISSION OF SIEMENS BUILDING TECHNO-LOGIES, INC.. FIRE SAFETY DIVISION. ALL OTHER REPRODUCTIONS SHALL BEAR THIS NOTICE.

REVISIONS By Date App

BHD | 5/2/05 | K ENGINEER OF RECORD BACKCHECK COMMENTS AS-BUILT DRAWINGS DATED 2/12/07 AS-BUILT DRAWINGS BUILDING AO 9/23/08 Δ 8 RETRO FIT DATED 2/12/07 AS-BUILT DRAWINGS BUILDING RB 3/12/09 Δ | 8 RETRO FIT DATED 3/12/09

DIVISION OF THE STATE ARCHITECT STAMP FILE NO. 41-C1



DESIGNED BY:

INTERFACE ENGINEERING

241 GRANT AVE ST 450 San Francisco, CA 94180

CONTRACTOR'S NAME & ADDRESS:

INTERMOUNTAIN **ELECTRIC**

1441 Bayport Avenue San Carlos, CA 94070

PRODUCT MANUFACTURER:

Siemens Building Technologies, Inc. Fire Safety Division

SAN FRANCISCO BRANCH 25821 Industrial Boulevard, Suite 300 Hayward, California 94545-2991 Tel (510) 783-6000 Fax (510) 293-2100 California State C10 License No. 758796 U.L. Certificate ID No. 324787-001

JOB NAME & LOCATION (STREET ADDRESS)

CAÑADA COLLEGE **BUILDING 8 RETROFIT**

4200 Farm Hill Boulevard Redwood City, California 94061

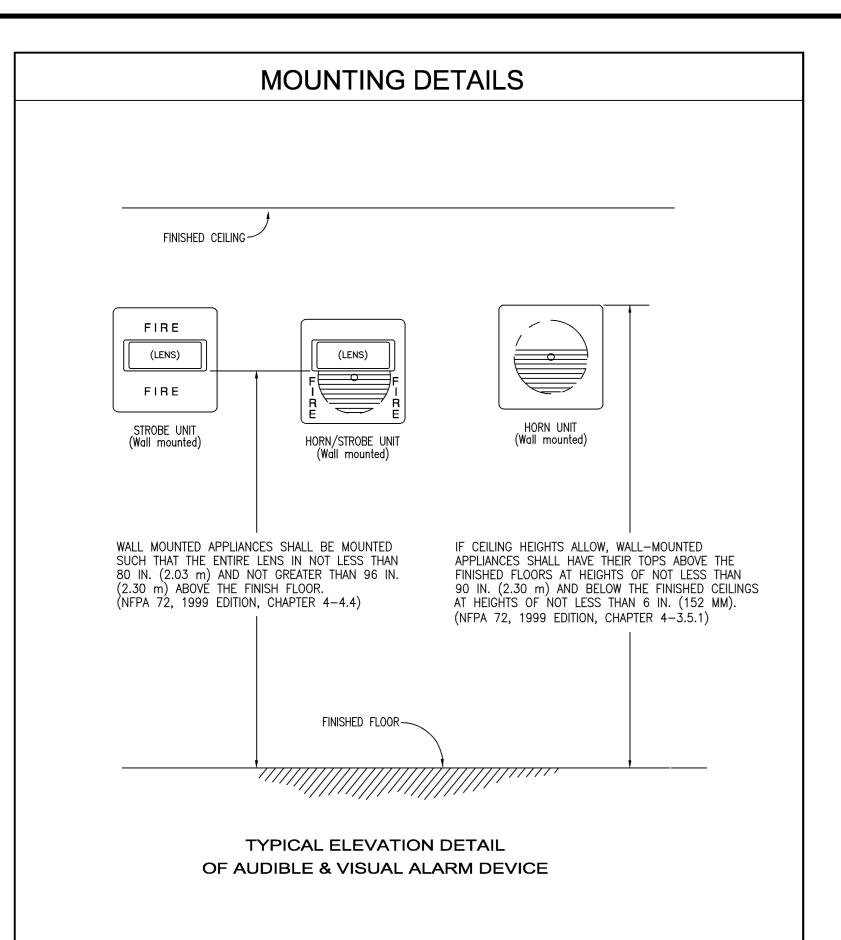
COVER SHEET

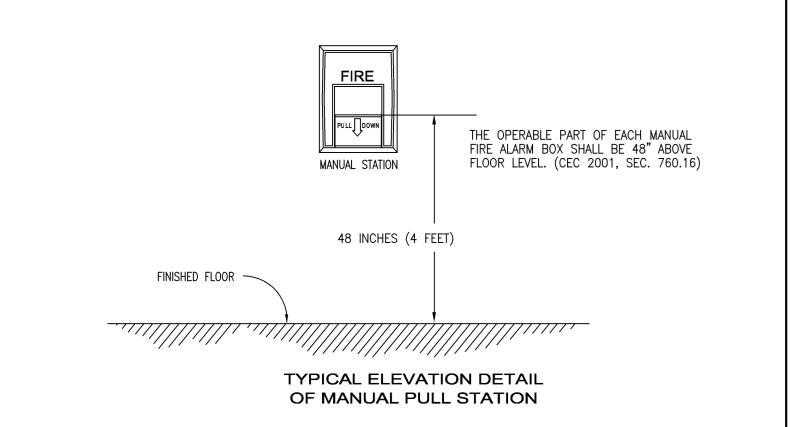
INSTALLATION TYPE

 □ PER CONTRACT DOCUMENT ■ EXISTING BASE JOB #

SYSTEM SALES REP.: Kelly Rogers

September 17, 2008 April 6, 2009 44OP-041807

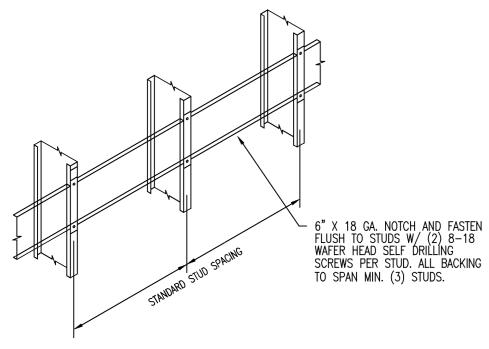




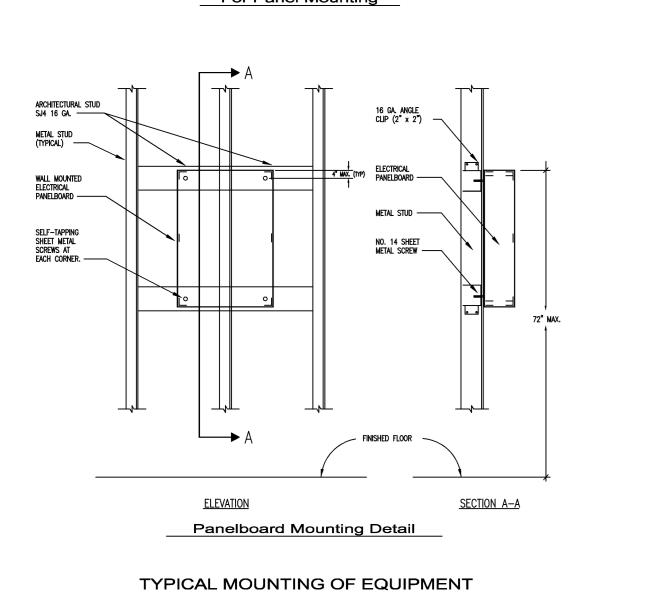
PANEL ANCHORAGE NOTE

ATTACHMENT OF EQUIPMENT WEIGHING LESS THAN 400 LBS. AND SUPPORTED DIRECTLY ON FLOOR OR ROOF STRUCTURE, FURNITURE OR TEMPORARY OR MOVABLE EQUIPMENT AND EQUIPMENT WEIGHING LESS THAN 20 LBS. THAT IS SUPPORTED BY VIBRATION ISOLATION DEVICES SUSPENDED FROM ROOF, WALL OR FLOOR NEED NOT BE DETAILED ON PLANS (CBC TITLE 24, PART 2, SECTION 1630A.1). HOWEVER, SUCH EQUIPMENT MUST BE SUPPORTED AND ANCHORED TO RESIST FORCES PRESCRIBED BY SECTION 1630A.2 AND THE ANCHORAGE SHALL BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD AND OSHPD AS PART OF FIELD REVIEWS/INSPECTIONS. THE INSPECTOR OF RECORDS SHALL ASSURE THAT THE ABOVE REQUIREMENTS ARE ENFORCED.

THE PS-12/24-8 POWER BOOSTER PANELS EACH WEIGHS LESS THAN 20 LBS. INCLUDING BATTERIES.



Metal Backing Gypsum Board Wall For Panel Mounting

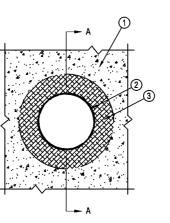


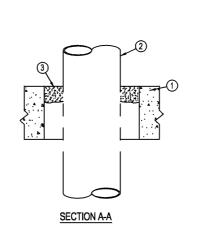
WEIGHING OVER 20 LBS. (120 LBS MAXIMUM)

THROUGH-PENETRATION FIRESTOP SYSTEM DETAILS

SYSTEM NO. CAJ1027 (FORMERLY SYSTEM NO. 202) F RATING - 3 HOUR

T RATING - 0 HOUR

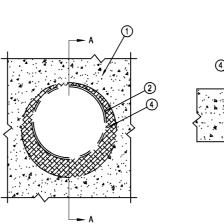


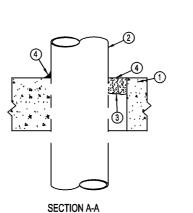


- 1. FLOOR OR WALL ASSEMBLY MIN 4-1/2 IN. THICK LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS. MAX THROUGH OPENING SIZE
- SEE CONCRETE BLOCKS (CAZT) CATEGORY IN FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.
- 2. PIPE OR CONDUIT NOM. 10 IN. DIA. (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE, NOM 6 IN. DIA. (OR SMALLER) RIGID STEEL CONDUIT, NOM 4 IN. DÍA. (OR SMALLER) STEEL EMT OR NOM 3 IN. DÍA. (OR SMALLER). TYPE L (OR HÉAVIER) COPPER PIPE. MAX ONE PIPE OR CONDUIT PER THROUGH OPENING. MAX ANNULAR SPACE BETWEEN PIPE OR CONDUIT AND EDGE OF OPENING IS 3/4 IN. MIN ANULAR SPACE BETWEEN PIPE OR CONDUIT AND EDGE OF OPENING IS 0 IN. (POINT CONTACT). PIIPE OR CONDUIT TO BE RIGIDLY SUPPORTED ON BOTH SIDES
- 3. FILL VOID OR CAVITY MATERIALS PUTTY-MOLDABLE PUTTY MATERIAL KNEEDED BY HAND AND APPLIED TO FILL ANNULAR SPACE TO A MIN DEPTH OF 1 IN FLUSH WITH TOP SURFACE OF FLOOR. IN WALL ASSEMBLIES, REQUIRED PUTTTY THICKNESS TO BE INSTALLED SYMMETRICALLY ON BOTH SIDES OF WALL. MINNESOTA MINING & MFG. CO.- MPS-2+. *BEARING THEUL CLASSIFICATION MARKING.

SYSTEM NO. CAJ1044 (FORMERLY SYSTEM NO 319)

T RATING - 0 HR L RATING AT AMBIENT - 2 CFM/SQ FT (SEE ITEM 4) L RATING AT 400 F - LESS THAN 1 CFM/SQ FT (SEE ITEM 4)





- 1. FLOOR WALL ASSEMBLY-LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF) CONCRETE. EXCEPT AS NOTED IN TABLE UNDER ITEM 4. MIN THICKNESS OF SOLID CONCRETE FLOOR OR WALL ASSEMBLY IS 4-1/2 IN. FLOOR MAY ALSO BE CONSTRUCTED OF ANY MIN 6 IN THICK UIL CLASSIFIED HOLLOW-CORE, PRECOAT CONCRETE UNITS, WHEN ELOOR IS CONSTRUCTED OF HOLLOW-CORE PRECOAT CONCETE UNITS, PACKING MATERIALS (ITEM 3) AND CAULK FILL MATERIAL (ITEM 4) TO BE INSTALLED SYMETRYCALLY ON BOTH SIDES OF THE FLOOR. FLUSH WITH FLOOR SURFACE, WALL ASSEMBLY MAY ALSO BE CONSTRUCTED OF CLASSIFIED CONCRETE BLOCKS. MAX DIA. OF OPENING IS 32 IN. SEE CONCTRETE BLOCKS (CAZT) AND PRECAST CONCRETE UNITS (CFTV) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURER
- 1A. STEEL SLEVE (OPTIONAL NOT SHOWN) NOM 16 IN. (OR SMALLER) SCHEDULE 10 (ORHEAVIER) STEEL SLEEVE CAST OR GROUTED INTO FLOOR OR WALL ASSEMBLY. SLEEVE MAY EXTEND A MAX OF 2 IN. ABOVE TOP FLOOR OR BEYOND EITHER SURFACE OF WALL.
- 2. PIPE OR CONDUIT NOM 30 IN.DIA. (OR SMALLER) CAST IRON OR SCHEDULE 10 (OR HEAVIER) STEEL PIPE, NOM 6 IN. DIA. (OR SMALLER) STEEL CONDUIT, NOM 3 IN. DIA. (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBE OR NOM 4 IN. DIA. (OR SMALLER) STEEL ELECTRICAL METALIC TUBING. MAX ANNU; AR SPACE BETWEEN PIPE OR CONDUIT AND EDGE OF THROUGH OPENING NOT TO EXCEED 2 IM. MIN ANNULAR SPACE BETWEEN PIPE OR CONDUIT AND EDGE OF THROUGH OPENING IS 0 IN. (POINT CONTACT). PIPE OR CONDUIT TO BE RIGIDLY SUPPORTED ON BOTH SIDE OF FLOOR OR WALL ASSEMBLY.
- 3. PACKING MATERIAL POLYETHYLENE BACKER ROD OR NOM 1 IN. THICKNESS OF THIGHTLY-PACKRD MINERAL WOOL BATT OR GLASS FIBER INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR OF FROM BOTH SURFACES OF WALL AS REQUIRED TO ACCOMODATE THE REQUIRED THICKNESS OF CAULK FILL MATERIAL (ITEM 4).
- 4. FILL, VOID OR CAVITY MATERIAL CAULK APPLIED TO FILL THE ANNULAR SPACE FLUSH WITH TOP SURFACE OF FLOOR. IN WALL ASSEMBLIES, REQUIRED CAULK THICKNESS TO BE INSTALLED SYMMETRICALLY ON BOTH SIDES OF WALL. FLUSH WITH WALL SURFACE. THE HOURLY F RATING AND THE MIN REQUIRED CAULK

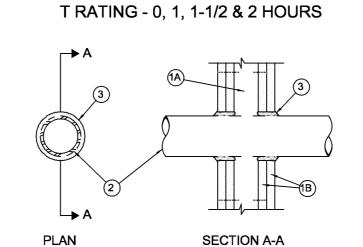
THICKNESS ARE DEPENDENT UPON A NUMBER OF PARAMETERS, AS SHOWN ON THE FOLLOWING TABLE.

MIN FLOOR	NOM PIPE	MAX	MAX	
OR WALL	TUBE OR CONDUIT	ANNULAR	CAULK	F
THKNS, IN	DIA. IN.	SPACE, IN	THKNS, IN	RATING, HR
2-1/2	1/2-12	1-3/8	1/2	2
2-1/2	1/2-12	2-7/8	1	2
4-1/2	1/2-6	1-3/8	1/4(a)	2
4-1/2	1/2-12	1-1/4	1/2	3
4-1/2	1/2-20	2	1	3
4-1/2	22-30	2	2	3
5-1/2	1/2-6	1-3/8	1(b)	4

(a) MIN 2 IN THICKNESS OF MINERAL-WOOL BATT INSULATION REQUIRED IN ANNULAR SPACE. (b) MIN 1 IN. THICKNESS OF MINERAL-WOOL BATT INSULATION REQUIRED IN ANNULAR SPACE ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. MIN 1IN. THICKNESS OF CAULK TO BE INSTALLED FLUSH WITH EACH SURFACE

MINNESOTA MINING & MANUFACTURING CO - TYPES CP-25 WB, CP-25 WB+. (NOTE: L RATING AND OR USE OF OPTIONAL SLEEVE APPLY ONLY WHEN TYPE CP-25WB + CAULK IS USED).

SYSTEM NO. WL1001 (FORMERLY SYSTEM NO 147) F RATING - 1 & 2 HOURS



1. WALL ASSEMBLY - THE 1.2.3. OR 4 HR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300 OR U400 SERIES WALL OR PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES: A. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS (MAX 2 HR FIRE RATED ASSEMBLIES) OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED 16 IN. O.C. WITH NOM 2 BY 4 IN. LUMBER END PLATES AND CROSS BRACES. STEEL STUDS TO BE MIN 3-5/8 IN. WIDE BY 1-3/8 IN. DEEP CHANNELS SPACED MAX 24 O.C. B. WALLBOARD GYPSUM * - NOM 1/2 OR 5/8 IN. THICK, 4 FT. WIDE WITH SQUARE OR

TAPERED EDGES. THE GYPSUM WALLBOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX DIAM OF OPENING IS 13-1/2 IN.

2. PIPE OR CONDUIT - NOM 12 IN. DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE, NOM 12 IN. DIAM (OR SMALLER) SERVICE WEIGHT (OR HEAVIER) CAST IRON SOIL PIPE, NOM 12 IN. DIAM (OR SMALLER) CLASS 50 (OR HEAVIER) DUCTILE IRON PRESSURE PIPE. NOM 6 IN. DIAM (OR SMALLER) STEEL CONDUIT, NOM 4 IN. DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR TYPE L (OR HEAVIER) COPPER TUBING OR NOM 1 IN. DIAM (OR SMALLER) FLEXIBLE STEEL CONDUIT. WHEN COPPER PIPE OR FLEXIBLE STEEL CONDUIT IS USED, MAX F RATING OF FIRESTOP SYSTEM (ITEM 3) IS 2 H. STEEL PIPES OR CONDUITS LARGER THAN NOM 4 IN. DIAM MAY ONLY BE USED IN WALLS CONSTRUCTED USING STEEL CHANNEL STUDS, A MAX OF ONE PIPE OR CONDUIT IS PERMITTED IN THE FIRESTOP SYSTEM PIPE OR CONDUIT TO BE INSTALLED NEAR CENTER OF STUD CAVITY WIDTH AND TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY.

3. FILL, VOID OR CAVITY MATERIAL * - CAULK - CAULK FILL MATERIAL INSTALLED TO COMPLETELY FILL ANNULAR SPACE BETWEEN PIPE OR CONDUIT AND GYPSUM WALLBOARD AND WITH A MIN 1/4 IN DIAM BEAD OF CAULK APPLIED TO PERIMETER OF PIPE OR CONDUIT AT ITS EGRESS FROM THE WALL. CAULK INSTALLED SYMMETRICALLY ON BOTH SIDES OF WALL ASSEMBLY. THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED. AS SHOWN IN THE FOLLOWING TABLE. THE HOURLY T RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE TYPE OR SIZE OF THE PIPE OR CONDUIT AND THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS

.,			
CONDUIT	ANNULAR SPACE IN	F RATING HR	T RATING HR
	0 TO 3/16	1 OR 2	0+, 1 OR 2
	1/4 TO 1/2	3 OR 4	3 OR 4
	0 TO 1/4	1 OR 2	0
	0 TO 1-1/2#	1 OR 2	0
	1/4 TO 1/2	3 OR 4	0
	3/16 TO 3/8	1 OR 2	0
), T RATING IS 0 H E APPLIES ONLY WHEN TYPE	CP-25 WB+ CAULK IS	SUSED

#0 TO 1-1/2 IN. ANNULAR SPACÉ APPLIES ONLY WHEN TYPE CP-25 WB+ CAULK IS USED. MINNESOTA MINING & MFG. CO. - TYPES CP-25 S/L, CP-25 N/S, CP-25 WB, CP-25 WB+. (NOTE: L RATINGS APPLY ONLY WHEN TYPE CP-25 WB+ CAULK IS USED)

(E)FIRE ALARM SEQUENCE OF OPERATION MATRIX														
NOTE: BLANK = NOT APPLICABLE R = REQUIRED ACTION	FACP ALARM, SCIENCE BUILDING & MAIN FACP, BUILDING 7	FACP TROUBLE, SCIENCE BUILDING & MAIN FACP, BUILDING 7	FACP SUPERVISORY, SCIENCE BUILDING & MAIN FACP, BUILDING 7	ANNUNCIATE ALARM @ RCC	ANNUNCIATE TROUBLE @ RCC	ANNUNCIATE SUPERVISORY @ RCC	ACTIVATE AUDIO/VISUAL THROUGHOUT THE BLDG.	ELEVATOR RECALL RECALL ELEVATORS TO DESIGNATED FLOOR AND STOP	ALTERNATE ELEVATOR RECALL RECALL ELEVATORS TO DESIGNATED FLOOR AND STOP	ELEVATOR SHUTDOWN		ALARM RECEIPT CAPABILITY DURING ABNORMAL CONDITIONS	HVAC SHUTDOWN	FIRE SMOKE DAMPER ACTIVATION
MANUAL PULL STAION	Х			Χ			Х							
AREA SMOKE DETECTOR	Х			Χ			Х							
SMOKE DETECTORS ON EITHER SIDE OF FIRE RATED DOOR ACROSS CORRIDOR	Х			Χ			Х							
DUCT SMOKE DETECTOR (HVAC UNITS)	Х			Χ			Х						Χ	
DUCT SMOKE DETECTOR (FIRE SMOKE DAMPER)	Х			Χ			Х						Χ	Х
AREA SMOKE DETECTOR (DEDICATED FOR FSD	Х			Χ			Х						Х	Х
ELEVATOR LOBBY - SMOKE DETECTOR "EXCEPT 1ST FLOOR" ELEVATOR LOBBY - SMOKE DETECTOR "1ST FLOOR ONLY" HEAT DETECTOR - ELEVATOR MACHINE RM. OR SHAFT								X	X	X				
WATERFLOW SWITCH	Х			Χ			Х							
VALVE TAMPER			Х			Х								
INITIATING CKT STYLE C (CLASS B)														
OPEN WIRE		X			Χ									
GROUNDED WIRE		X			Χ							R		
SHORTED WIRES		Х			Χ									
LOSS OF CARRIER		Х			Χ									
NOTIFICATION CKT STYLE Y (CLASS B)														
OPEN WIRE		X			Х									
GROUNDED WIRE		X			Х							R		
SHORTED WIRES		Х			Χ									
SIGNALING LINE CKT STYLE 3 (CLASS B)														
OPEN WIRE		Х			Х									
GROUNDED WIRE		Х			Х							R		
WIRE TO WIRE SHORT & OPEN		X		_	Χ									
WIRE TO WIRE SHORT & GROUND		Х			Χ									
OPEN & GROUND		Х			Χ									
LOSS OF CARRIER		Х			Х									

WIRING GUIDELINES

PLENUM CABLE VS. NON-PLENUM

THE NEC RECOGNIZES 3 TYPES OF POWER LIMITED FIRE ALARM CABLING:

FPL - THIS IS A GENERAL USE POWER LIMITED FIRE ALARM CABLE. IT CANNOT BE USED IN A PLENUM SPACE OR FOR RISERS (CABLING BETWEEN FLOORS), CABLE MUST BE IN CONDUIT. FPLR - THIS IS A POWER LIMITED RISER RATED CABLE THAT CAN BE USED FOR GENERAL PURPOSES OR BETWEEN FLOORS. IT CANNOT BE USED IN A PLENUM SPACE, CABLE MUST BE IN CONDUIT.

FPLP - THIS IS A POWER LIMITED CABLE THAT CAN BE USED IN A PLENUM, RISER, OR FOR

A PLENUM IS ANY AREA USED TO CONDUCT ENVIRONMENTAL AIR. PLENUM SPACES CAN BE DUCTWORK, THE SPACE ABOVE A DROP CEILING, OR BELOW A RAISED FLOOR. BECAUSE THESE SPACES ARE BEING USED FOR THE AIR HANDLING SYSTEM. THERE ARE STRICT RULES THAT MUST BE FOLLOWED TO REDUCE THE RISK OF INTRODUCING TOXIC FUMES IN THE EVENT OF A FIRE. SINCE FIRE ALARM CABLING IS OFTEN INSTALLED EXPOSED, WITHOUT CONDUIT, ABOVE DROP CEILINGS THE CABLING MUST BE RATED FOR USE IN A PLENUM SPACE.

WIRING REQUIREMENTS

- THE DRAIN SHIELD IS A VERY IMPORTANT PART OF THE SYSTEM INSTALLATION. WE WOULD NOT SPECIFY SHIELDED CABLE IF IT WAS NOT NECESSARY. SHIELDS SHOULD BE KEPT CONTINUOUS THROUGHOUT THE CIRCUIT AND KEPT FREE FROM ANY REFERENCE TO EARTH GROUND.
- SHIELDED CABLE CAN BE FPL, FPLR, OR FPLP. SIEMENS INTELLIGENT ADDRESSABLE DEVICES REQUIRE SHIELDED CABLE.
- NOTIFICATION APPLIANCES (I.E. HORN/STROBES, HORNS, ETC.) REQUIRE NON-SHIELDED
- UNDERGROUND CABLE, WHETHER OR NOT INSTALLED IN CONDUIT, SHALL BE LISTED AS UNDERGROUND BURIAL TYPE.
- WIRING IS TO BE INSTALLED POINT TO POINT WITH NO SPLICING.

WIRING REQUIREMENTS
EXAMPLES: SD 2 - 7 DEVICE REFERENCE NUMBER INITIATING ALD LOOP DESIGNATION DEVICE SYMBOL (SMOKE DETECTOR)
A U D I B L E / V I S U A L C I R C U I T S: 15cd ← STROBE CANDELA RATING EXAMPLES: S1-1 ← DEVICE REFERENCE NUMBER ↑ ↑ HORN/STROBE CIRCUIT DESIGNATION DEVICE SYMBOL (HORN/STROBE)

<u>A</u>	2-CONDUCTOR, #16 AWG SOLID TWISTED SHIELDED CABLE Cable Part Number: F1TSP16SRD-FPLR (CONDUIT) F1TSP16SRD-FPLP (PLENUM)	ADDRESSABLE ALARM INITIATING DEVICES: - FP-SERIES SMOKE DETECTORS - TRI-SERIES INTERFACE MODULES - AD-SERIES DUCT DETECTORS - MSI-SERIES PULL STATION
} }	2-CONDUCTOR, #12 AWG SOLID or STRANDED (PER NEC) Cable Part Number: FA-1202C-1-1N-03 (CONDUIT) FA-1202C-1-2N-03 (PLENUM)	NOTIFICATION APPLIANCE CIRCUIT: - STROBE CIRCUIT - HORN/STROBE CIRCUIT
Ç	2-CONDUCTOR, #16 AWG SOLID TWISTED CABLE Cable Part Number: F1TP16SRD-FPLR (CONDUIT) F1TP16SRD-FPLP (PLENUM)	NOT USED Voice audio circuit; — speaker circuit
<u>D</u> →	2-CONDUCTOR, #12 AWG SOLID or STRANDED (PER NEC) Cable Part Number: FA-1202C-1-1N-03 (CONDUIT) FA-1202C-1-2N-03 (PLENUM)	24 VDC POWER TO: - FIRE ALARM PANELS - DOOR HOLDERS
; 	2-CONDUCTOR, #16 AWG SOLID TWISTED SHIELDED CABLE Cable Part Number: F1TSP16SRD-FPLR (CONDUIT) F1TSP16SRD-FPLP (PLENUM)	NOT USED Telephone circuit: — firefighter's telephone jack — firefigter's remote telephone station
; G → →	2-CONDUCTOR, #16 AWG SOLID TWISTED CABLE Cable Part Number: F1TP16SRD-FPLR (CONDUIT) F1TP16SRD-FPLP (PLENUM)	MISCELLANEOUS FIELD DEVICES: - TRI to MONITORED DEVICES - WATERFLOW SWITCH / TAMPER SWITCH - DIGITAL DIALER to FACP - TSM-1 TEST SWITCH
H 	2-CONDUCTOR, #12 AWG SOLID or STRANDED (PER NEC) Cable Part Number: FA-1202C-1-1N-03 (CONDUIT) FA-1202C-1-2N-03 (PLENUM)	NOT USED NOTIFICATION APPLIANCE CIRCUIT: - HORN CIRCUIT - CHIME CIRCUIT
<u>₩</u>	2-CONDUCTOR, #16 AWG SOLID TWISTED SHIELDED CABLE Cable Part Number: F1TSP16SRD-FPLR (CONDUIT) F1TSP16SRD-FPLP (PLENUM)	"M-NET" - MXL NETWORK WIRING: - MMB-2 / NET-7 / NET-4 (MMB-2 / PSR-1 / ANN / FIP / FDP)
	2-CONDUCTOR, #16 AWG SOLID TWISTED SHIELDED CABLE Cable Part Number: F1TSP16SRD-FPLR (CONDUIT) F1TSP16SRD-FPLP (PLENUM)	NOT USED VOICE AUDIO RISER: LOW LEVEL - DISTRIBUTED AMPLIFICATION (TBM-2, OCC-1 TO OCC-1 CARD)
× \	2-CONDUCTOR, #16 AWG SOLID TWISTED SHIELDED CABLE Cable Part Number: F1TSP16SRD-FPLR (CONDUIT) F1TSP16SRD-FPLP (PLENUM)	NOT USED "X-NET" - GLOBAL NETWORK WIRING: - NIM-1W to NIM-1W (MXL / MXL-V / MXL-IQ)
P	2-CONDUCTOR, #12 AWG SOLID or STRANDED (PER NEC) Cable Part Number: FA-1202C-1-1N-03 (CONDUIT) FA-1202C-1-2N-03 (PLENUM)	EXTENDER PANEL ACTIVATION: - SIEMENS PAD-3 EXTENDER PANEL - WHEELOCK PS-12/24-8 EXTENDER PANEL
120 VAC - /// -	2-CONDUCTOR, #12 AWG SOLID, THHN (GROUNDED WIRE)	120 VAC POWER WIRING TO: - F.A. CONTROL PANELS - AMPLIFIER PANELS - POWER SUPPLY PANEL - FIRE ALARM PRINTERS
WIRING NOT	<u>E:</u>	

"UNDERGROUND CABLE"

2AS-1602POS = 2 CONDUCTOR #16 GUAGE SOLID TWISTED SHIELDED

2A-1202 = 2 CONDUCTOR #12 GUAGE SOLID "UNDERGROUND CABLE"

BUILDING 8 RETROFIT

CAÑADA COLLEGE

THIS DRAWING AND DESIGNS THEREON SHALL NOT BE DUPLICATED, USED OR DISCLOSED TO OTHERS FOR PROCUREMENT OR OTHER PURPOSE (EXCEPT AS OTHERWISE AUTHORIZED BY CONTRACT)

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REVISIONS

🔨 | AS-BUILT DRAWINGS BUILDING| AO |9/23/08|

↑ AS-BUILT DRAWINGS BUILDING RB 3/12/09

By Date App

BHD 5/2/05 K

MM | 2/13/07 |

SHALL BEAR THIS NOTICE.

ENGINEER OF RECORD

BACKCHECK COMMENTS

 $\frac{2}{1}$ 8 RETRO FIT DATED 2/12/07

 Δ | 8 RETRO FIT DATED 3/12/09|

DIVISION OF THE STATE ARCHITECT STAMP

DESIGNED BY:

FILE NO. 41-C1

01- 109554

___ FLS_____SS__

INTERFACE

ENGINEERING

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San Francisco, CA 94180

Tel no: (415)489-7240 Fax no: (415)489-7289

INTERMOUNTAIN

ELECTRIC

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Siemens Building Technologies, Inc.

Fire Safety Division

SAN FRANCISCO BRANCH

25821 Industrial Boulevard, Suite 300

Hayward, California 94545-2991

Tel (510) 783-6000 Fax (510) 293-2100

California State C10 License No. 758796 U.L. Certificate ID No. 324787-001

JOB NAME & LOCATION (STREET ADDRESS)

CONTRACTOR'S NAME & ADDRESS:

PRODUCT MANUFACTURER:

AS-BUILT DRAWINGS

△ DATED 2/12/07

4200 Farm Hill Boulevard Redwood City, California 94061

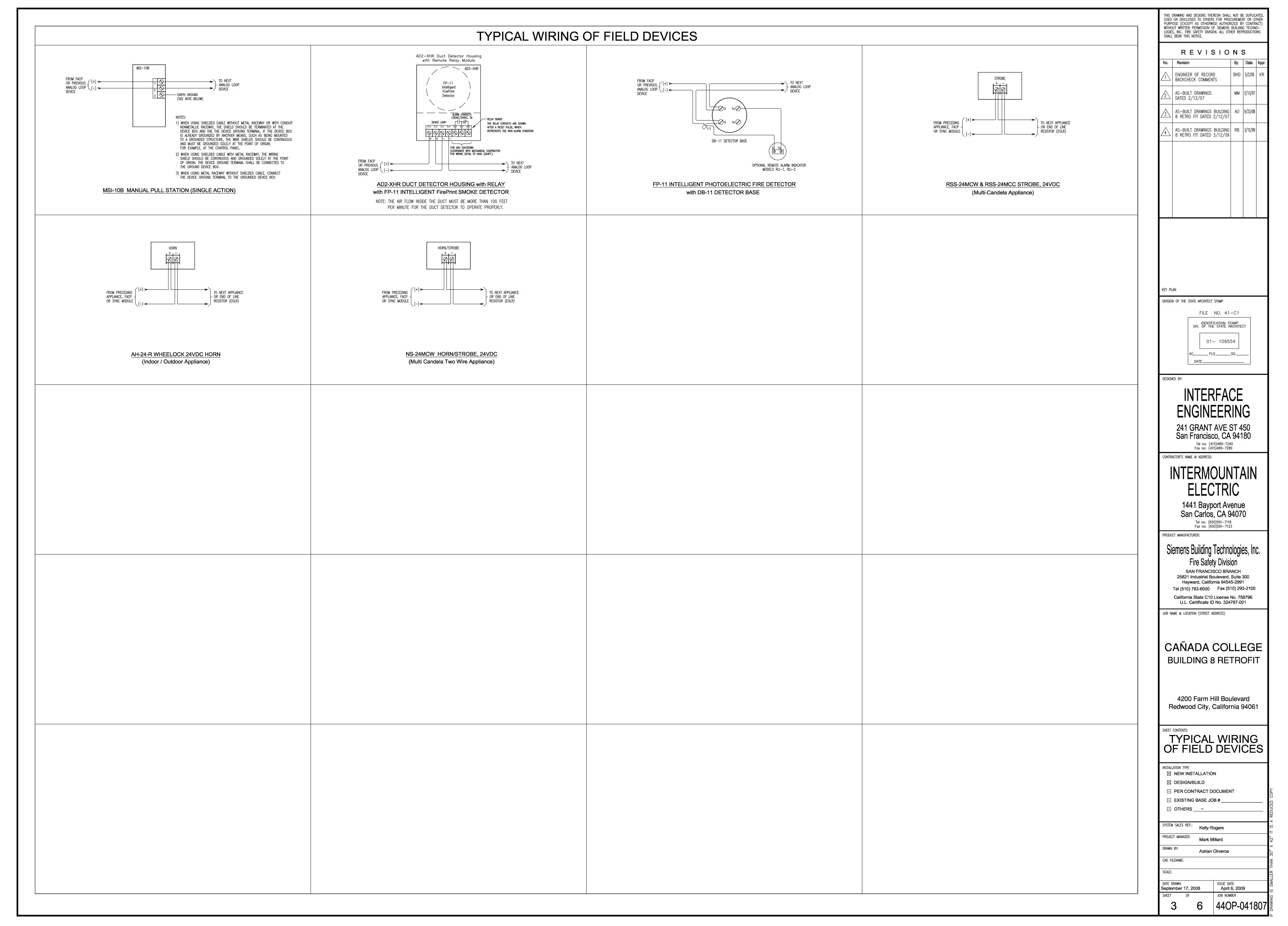
MISC. DETAILS

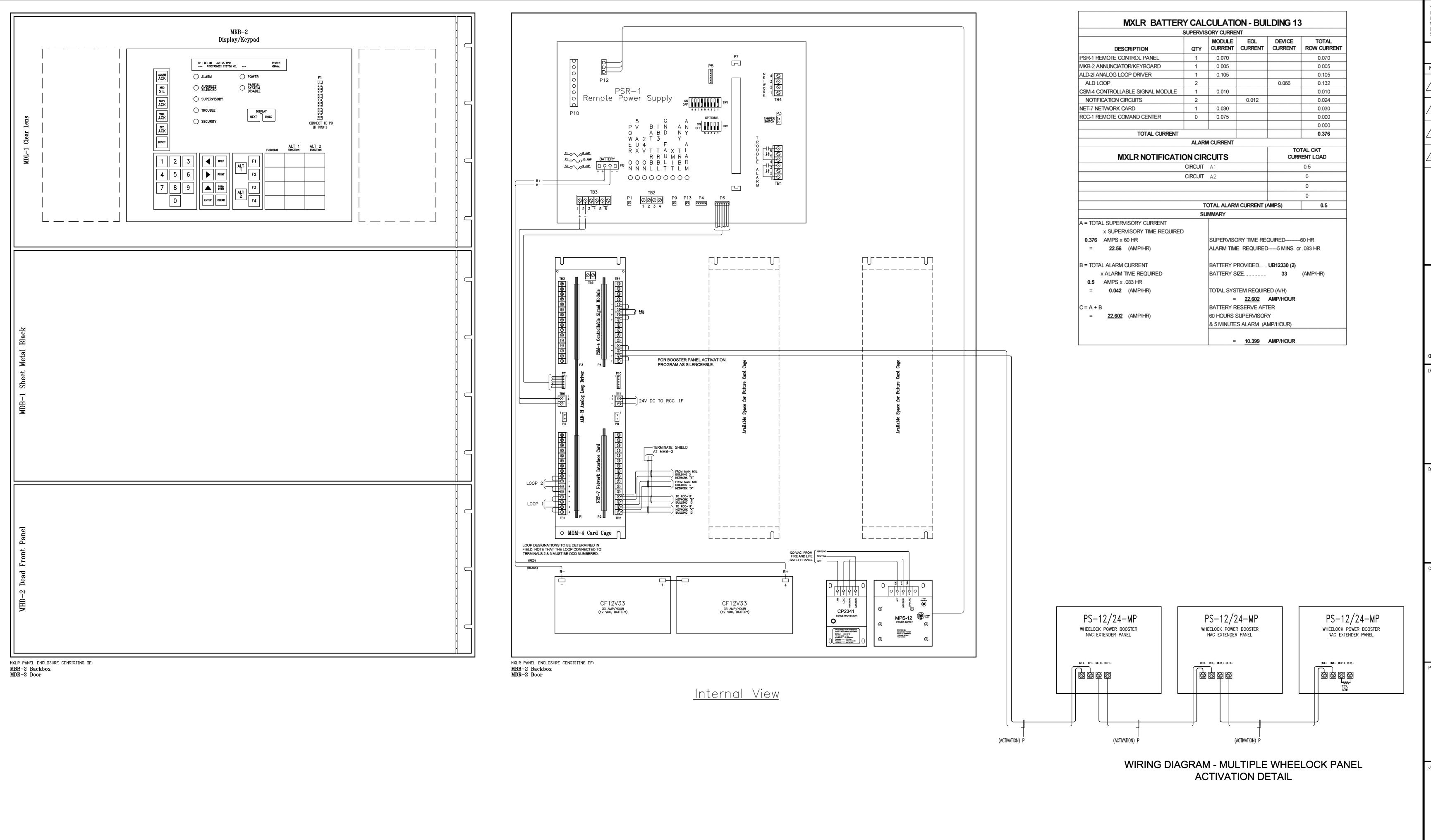
INSTALLATION TYPE □ DESIGN/BUILD □ PER CONTRACT DOCUMENT ■ EXISTING BASE JOB # _

SYSTEM SALES REP.: Kelly Rogers PROJECT MANAGER:

Adrian Oliveros CAD FILENAME:

September 17, 2008 April 6, 2009





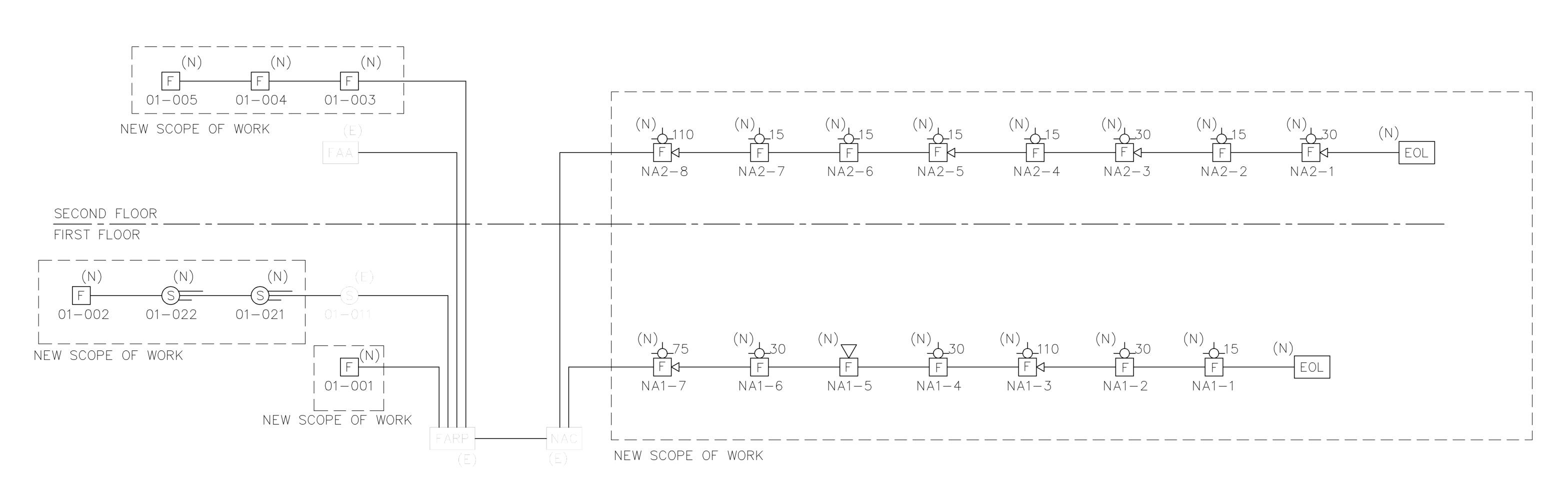
MXLR — REMOTE FIRE ALARM CONTROL PANEL Building 8, Canada College

	NOTIFICATION CIRCUIT - NA1								
			VO	LTAGE	DROP (CALCULAT	TONS		
		BASED	ON POINT-TO	-POINT OHM'S	CALCULATION	18. ACCEPTABLE LIN	ATT: 10% x 24V =	2.4 (MAX)	
		OHMS	- (#14 FEET+	3,07/1000 +1/1 2	FEET+ 1,93/100	00 + #10 FEET+ 1.21/10	000) • 2		
	1) A/V 15cd		0.074	2) A/V 30cd		0.107	3) A/V 75cd		0.184
	4) A/V 110cd		0.244	5) V/O 15cd		0.060	6) V/O 30cd		0.092
	7) V/O 75cd		0.165	8) V/O 110cd		0.220	9) A/V 135cc	ı	0.350
	10) A/V 185ca	d	0.477	11) V/O 135cd	i	0.300	12) A/O		0.044
		то		LINEAR FEE	Г	RESISTANCE	LOAD	VOLTAGE	ACCUM.
DEVICE	DEVICE	DEVICE	BE	TWEEN DEVI	CE8	OF WIRES	ON RUN	DROP	VOLTAGE
TYPE #	#		# 14	#12	#10	(OHMS)	(AMPS)	(VOLTS)	DROP (V)
5	1	2	25			0.154	0.060	0.009	0.009
6	2	3	25			0.154	0.152	0.023	0.033
4	3	4	30			0.184	0.396	0.073	0.105
6	4	5	35			0.215	0.488	0.105	0.210
12	5	6	50			0.307	0.532	0.163	0.374
6	6	7	25			0.154	0.624	0.096	0.469
		1	ı	1	1	1	1	I	I

			N	IOTIFICA	ATION C	CIRCUIT - N	A2		
			VO	LTAGE	DROP (CALCULA1	TONS		
		BASED	ON POINT-TO	POINT OHM'S	CALCULATION	NB. ACCEPTABLE LIN	ATT: 10% x 24V =	2.4 (MAX)	
		OHMS	- (#14 FEET+	3,07/1000 +412	FEET+ 1.93/100	00 + #10 FEET+ 1.21/10	00) + 2		
	1) A/V 15cd		0.074	2) A/V 30cd		0.107	3) A/V 75cd		0
	4) A/V 110cd		0.244	5) V/O 15cd		0.060	6) V/O 30cc	1	0
	7) V/O 75cd		0.165	8) V/O 110cd	I	0.220	9) A/V 135cd	i	0
	10) A/V 185cd	d	0.477	11) V/O 135cc	1	0.300	12) V/O 185c	d	0
		то		LINEAR FEE	Т	RESISTANCE	LOAD	VOLTAGE	A
DEVICE	DEVICE	DEVICE	В	ETWEEN DEVI	ÇE8	OF WIRES	ON RUN	DROP	vo
TYPE #			#14	#12	#10	(OHMS)	(AMPS)	(VOLTS)	DF
2	1	2	50			0.307	0.107	0.033	_ 0
5	2	3	25			0.154	0.167	0.026	_ c
2	3	4	45			0.276	0.274	0.076	0
5	4	5	40			0.246	0.334	0.082	<u></u>
1	5	6	25			0.154	0.408	0.063	<u></u>
5	6	7	30			0.184	0.468	0.086	(
5	7	8	30			0.184	0.528	0.097	<u></u>
4	8	NAC	50			0.307	0.772	0.237	
Percent	Loss	2.91%							

			<u> LOAD CL</u>	<u>JRRENT P</u>	<u>ER CIRCU</u>
MODULE	QUANTITIY	STANDBY 24VDC MODULE CURRENT	EOL DEVICE	DEVICE CURREN	
PSR-1	1	0.070			
MKB-2	1	0.005	1		
RCC-1/1F	1	0.075			
CSM-4	1	0.010	0.024		(
ALD-2I	1	0.105		0.2	40 (
NET-7/7M	1	0.030			
		TOTAL	SUPERVISOR	RY CURRE	NT
			TO	TAL A X	24 13
		BATTERY SIZE	E WITH ALAF	RM RESER	VE 1
	<u>-24–8MC</u> BATTERY CA	<u>BATTERY C</u> LCULATION	LACULATI	<u>on Sh</u>	<u>LLI</u>
			Ş	STANDBY	ALARM
PS-24-8	ИC			0.080	0.24
NAC CURR	RENT				1.19
					1
STANDBY	AH = STAN	DBY A X 24 =		1.920	
ALARM AH	= ALARM	A X 0.0833H =			0.12
TOTAL AL	- ALARM	AH + STANDBY A	H =		2.04
TOTAL AN	— ALANW /	ALL T STANDOL A	··· –		2.04
BACKUP B	BATTERY =	TOTAL AH X 1.1	=		2.24

PURP WITHO LOGIE	OR DISCLOSI OSE (EXCEPT OUT WRITTEN I	DESIGNS THE ED TO OTHERS AS OTHERW PERMISSION O SAFETY DIVISION NOTICE.	S FOR PRO ISE AUTHOR F SIEMENS	CUREMEN RIZED BY BUILDIN	NT OR 01 (CONTRA G TECHNA	THER ACT) O-
	R E	VIS	S I O	N S	3	
No.	Revision			Ву	Date	Appr.
1		OF RECOR CK COMMEN		BHD	5/2/05	KR
<u>/2</u>	AS-BUILT DATED 2/	DRAWINGS 12/07		ММ	2/13/07	
/3\		DRAWINGS FIT DATED		AO	9/23/08	
4		DRAWINGS FIT DATED		RB	3/12/09	
	N OF THE STA	DIV. OF THE	NO. 41	FAMP RCHITEC	et	
	EN 241 G	ITER GINE BRANT	EER	IN	G	
CONTRA	San F	Fax no: (41	O, CA	941		
	NTE L 144 San	Tel no: (41 Fax no: (41 & ADDRESS: RMC LEC 1 Bayp Carlos Tel no: (65 Fax no: (65	DUN TRI ort Av , CA 9	941 T / C enue	80 	
PRODU	ACTOR'S NAME NTE 144 San CT MANUFACTU EMENS F SAI 25821 II Hayw Tel (510) 7 California U.L. C	Tel no: (41 Fax no: (41 & ADDRESS: RMC LEC 1 Bayp Carlos Tel no: (65 Fax no: (65	DUN TRI ort Av , CA 9 (0)591-7118 (b) Division Sco BRA pulevard, rnia 9454 Fax (5-1)	941 O enuce 407 33 O logic ion NOCH Suite : 5-299 10) 293 No. 75	80 300 3-2100 8796	
PRODU Si	ACTOR'S NAME NTE 144 San CT MANUFACTU EMENS SAI 25821 III Hayw Tel (510) 7 California U.L. C	Tel no: (41 Fax no: (41 & ADDRESS: RMC LEC 1 Bayp Carlos Tel no: (65 Fax no: (65 Fax no: (65 Fax no: (65 ADDRESS: IT Bayp Carlos Tel no: (65 Fax no	DUNCT AV., CA 9 OUNCT	941 9 17 C enue 407 3 100 No. 75 787-00 TRO	80 4 N 80 85, Inc. 8796 25 FI	E
JOB N	ACTOR'S NAME NTE 144 San CT MANUFACTU EMENS SAI 25821 In Hayw Tel (510) 7 California U.L. C AME & LOCATI AME & LOCATI 4200	Tel no: (41 Fax no: (41 & ADDRESS: RMC LEC 1 Bayp Carlos Tel no: (65 Fax no:	DUNCT AV (5)489-728 OUNCT AV (CA 9) (SO)591-7118 (SO)591-712 Technology Division of Second Brade of Seco	941 9 17/ C enuce 1407 3 10) 0916 5-299 10) 293 No. 75 787-00	80 4 N 80 80 85, Inc. 8796 13-2100 8796 13-2100 8796	E T
PRODU Si	ACTOR'S NAME NTE 144 San CT MANUFACTU CMENS SAI 25821 II Hayw Tel (510) 7 California U.L. C AME & LOCATI ANE & LOCATI ANE & LOCATI CONTENTS: CONTENTS: CONTENTS:	Tel no: (41 Fax no: (41 & ADDRESS: RMC LEC 1 Bayp Carlos Tel no: (65 Fax no:	COLUMN SCO BRADULEVARD, CA SO DIVISION SCO BRADULEVARD, CA SO	941 9 17 C enue 407 3 10) 293 No. 75 787-00 LA	80 	E T 1 /
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(N) NEW DEVICES

(E) EXISTING DEVICES

FIRE ALARM RISER DIAGRAM NO SCALE

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	REVISIO	N S	3	
No.	Revision	Ву	Date	Αp
\triangle 1	ENGINEER OF RECORD BACKCHECK COMMENTS	BHD	5/2/05	K
2	AS-BUILT DRAWINGS DATED 2/12/07	ММ	2/13/07	
3	AS-BUILT DRAWINGS BUILDING 8 RETRO FIT DATED 2/12/07	AO	9/23/08	
4	AS-BUILT DRAWINGS BUILDING 8 RETRO FIT DATED 3/12/09	RB	3/12/09	

DIVISION OF THE STATE ARCHITECT STAMP

FILE NO. 41-C1 01- 109554

DESIGNED BY:

INTERFACE ENGINEERING

241 GRANT AVE ST 450 San Francisco, CA 94180

CONTRACTOR'S NAME & ADDRESS:

INTERMOUNTAIN **ELECTRIC**

1441 Bayport Avenue San Carlos, CA 94070 Tel no: (650)591-7118 Fax no: (650)591-7123

PRODUCT MANUFACTURER:

Siemens Building Technologies, Inc. Fire Safety Division

SAN FRANCISCO BRANCH
25821 Industrial Boulevard, Suite 300
Hayward, California 94545-2991
Tel (510) 783-6000 Fax (510) 293-2100 California State C10 License No. 758796 U.L. Certificate ID No. 324787-001

JOB NAME & LOCATION (STREET ADDRESS)

CAÑADA COLLEGE **BUILDING 8 RETROFIT**

4200 Farm Hill Boulevard Redwood City, California 94061

FIRE ALARM RISER DIAGRAM

☑ NEW INSTALLATION □ DESIGN/BUILD

INSTALLATION TYPE

 □ PER CONTRACT DOCUMENT

SYSTEM SALES REP.: Kelly Rogers

Adrian Oliveros

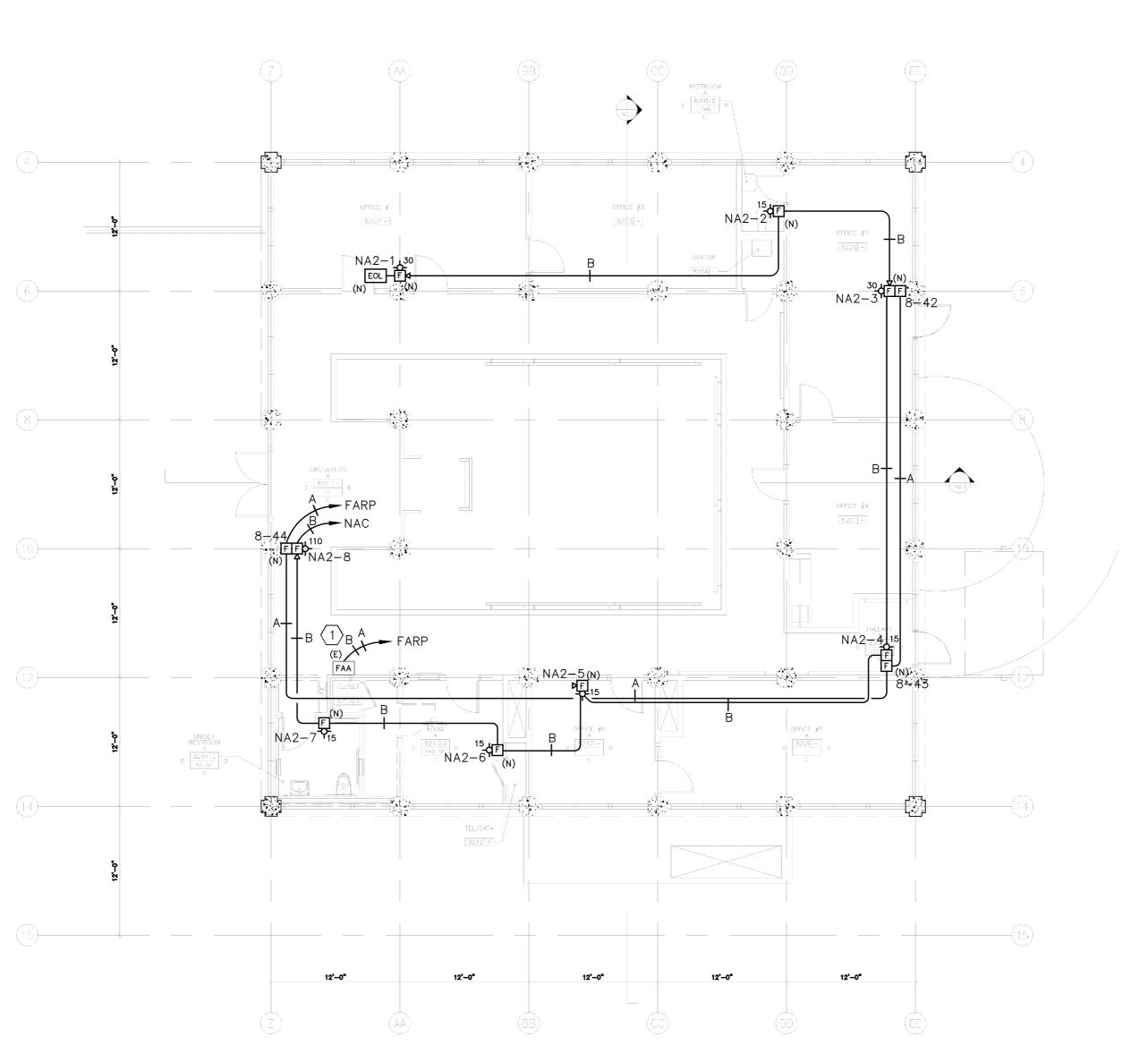
CAD FILENAME:

ISSUE DATE:
April 6, 2009 September 17, 2008 440P-041807

NEW SCOPE OF WORK 2 12'-0" FA4.1) 12'-0"



(E) EXISTING DEVICES (N) NEW DEVICES



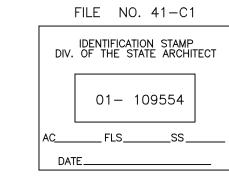


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REVISIONS

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				l

DIVISION OF THE STATE ARCHITECT STAMP



DESIGNED BY:

INTERFACE **ENGINEERING**

241 GRANT AVE ST 450 San Francisco, CA 94180 Tel no: (415)489-7240 Fax no: (415)489-7289

CONTRACTOR'S NAME & ADDRESS:

INTERMOUNTAIN **ELECTRIC**

1441 Bayport Avenue San Carlos, CA 94070 Tel no: (650)591-7118 Fax no: (650)591-7123

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JOB NAME & LOCATION (STREET ADDRESS)

CAÑADA COLLEGE **BUILDING 8 RETROFIT**

4200 Farm Hill Boulevard Redwood City, California 94061

FIRE ALARM PLAN FIRST AND SECOND FLOOR

INSTALLATION TYPE

MEW INSTALLATION ☑ DESIGN/BUILD □ PER CONTRACT DOCUMENT

 ■ EXISTING BASE JOB # _ OTHERS ______

SYSTEM SALES REP.: Kelly Rogers PROJECT MANAGER:

Adrian Oliveros CAD FILENAME:

DATE DRAWN: September 17, 2008 ISSUE DATE:
April 6, 2009

44OP-041807