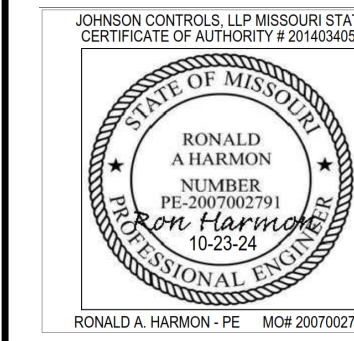
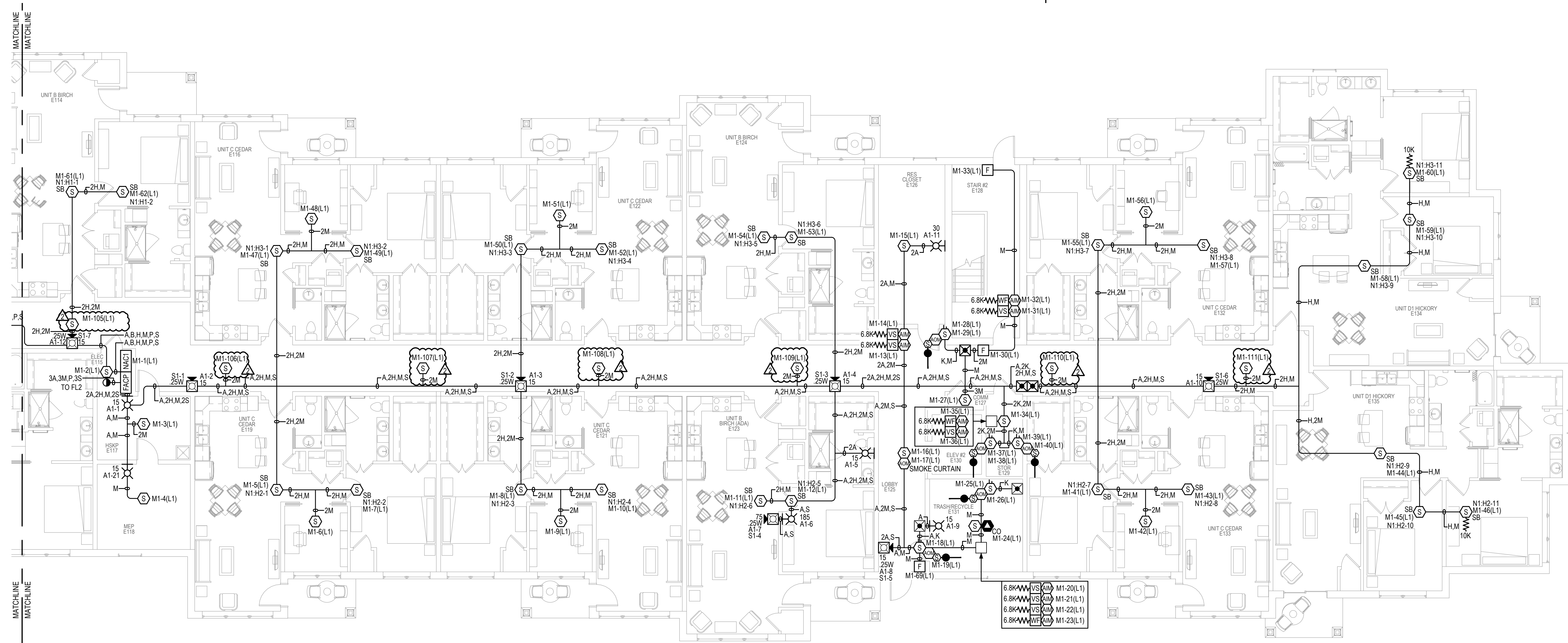




JOHN KNOX VILLAGE
1001 NW CHIPMAN RD
LEE'S SUMMIT, MO 64081

LEE'S SUMMIT, MO 64081



JOHN KNOX VILLAGE COURTYARDS BUILDING E

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[illegible]

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JOB #:	
PROJECT #:	332-650560594

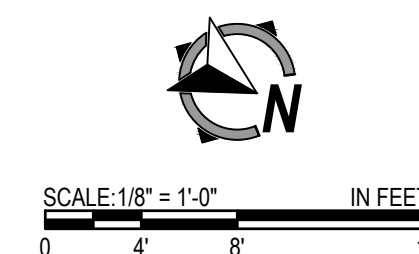
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FIRE ALARM SYSTEM

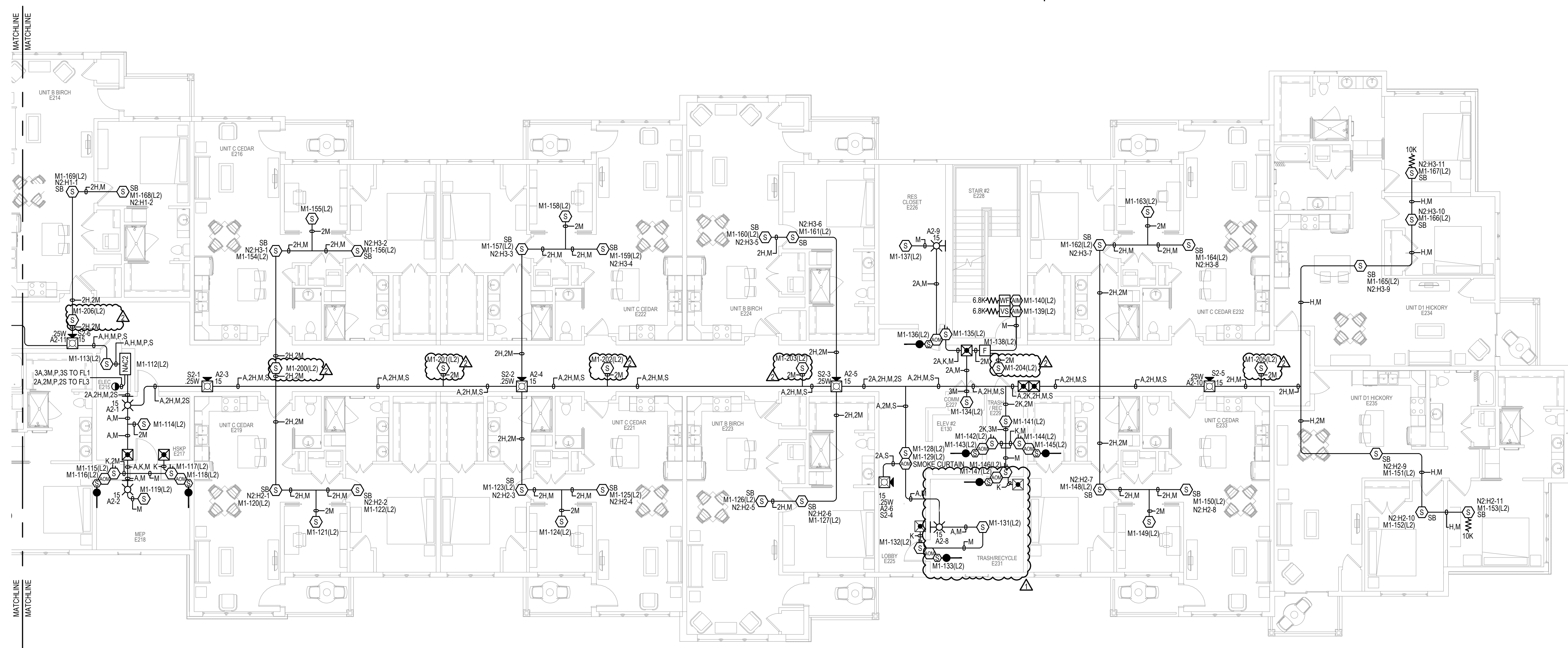
SHEET:

FL1 DEVICE PLACEMENT PLAN

FA-101

FL1 DEVICE PLACEMENT PLAN



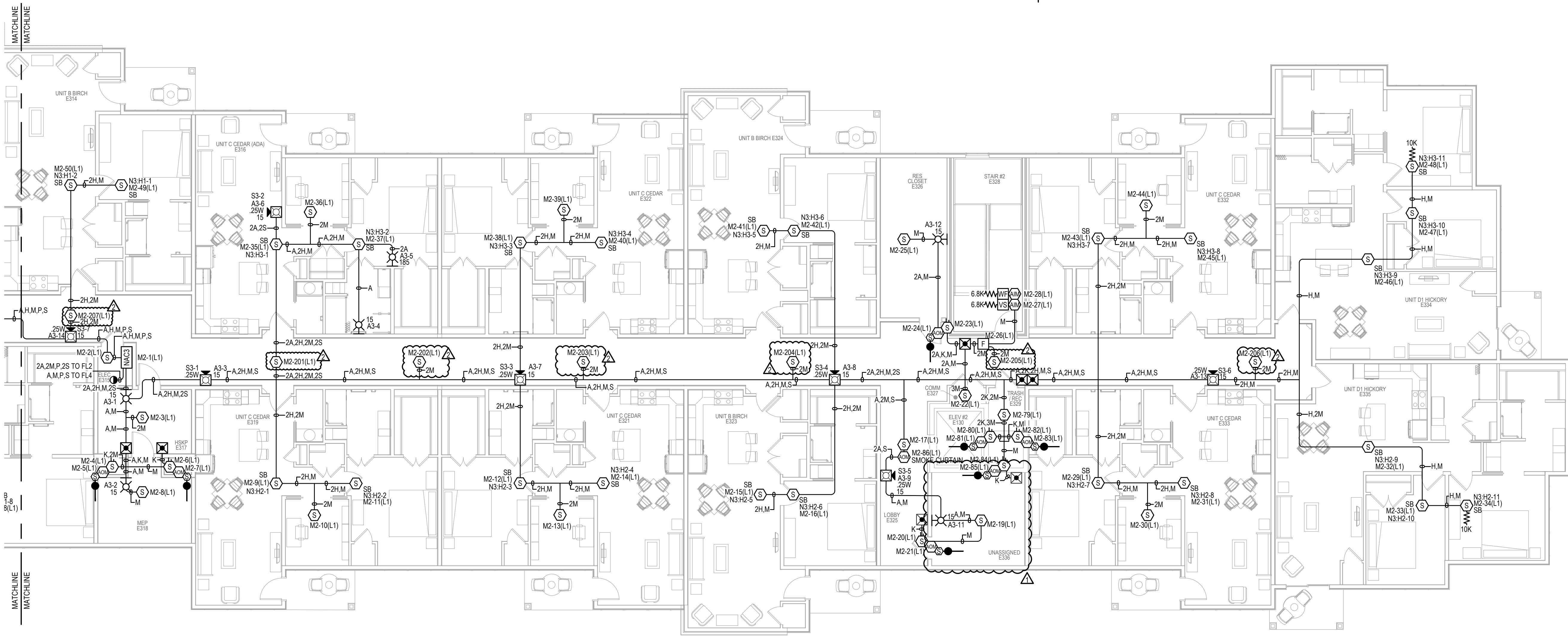


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- JOHN KNOX VILLAGE
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JOB #:	
PROJECT #:	332-650560594
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SYSTEM:	
FIRE ALARM SYSTEM	
SHEET:	
FL2 DEVICE PLACEMENT PLAN	

FA-102

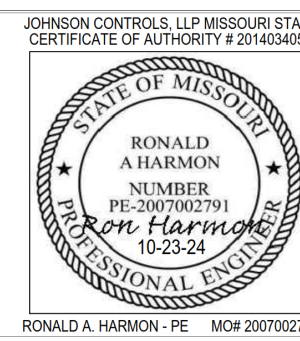


NOT IN SCOPE

SCALE: 1/8" = 1'-0"

1 FIELD TO VERIFY EXACT LOCATION.

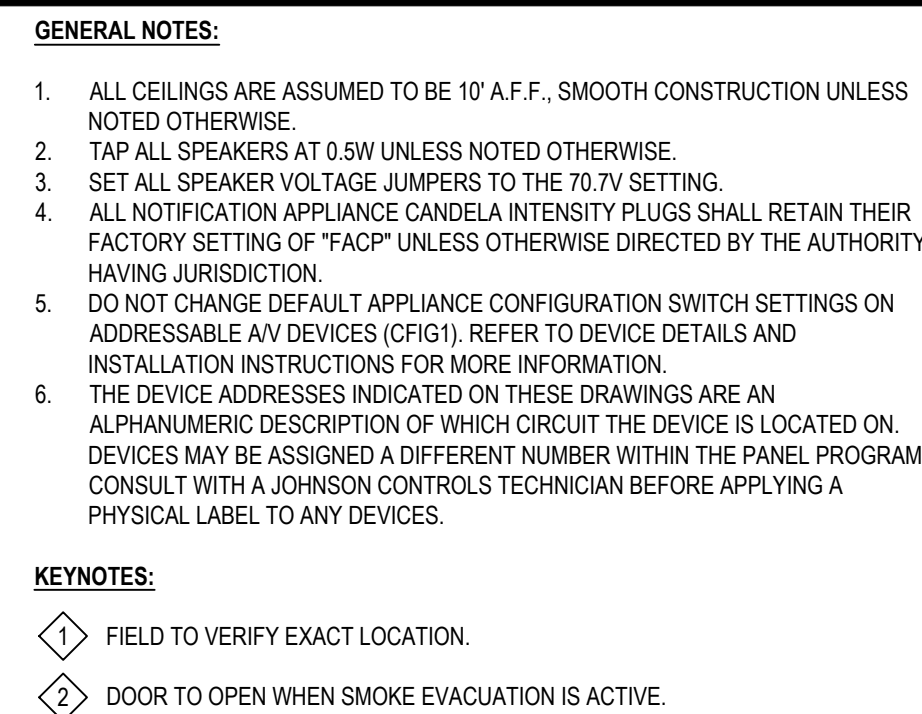
2 DOOR TO OPEN WHEN SMOKE EVACUATION IS ACTIVE



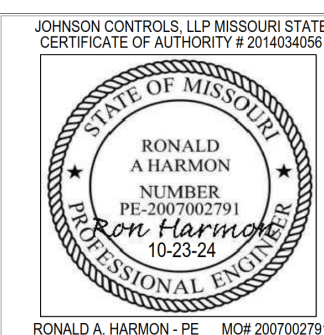
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LEE'S SUMMIT, MO 64081

[illegible]

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CHECKED BY:	TIM EUBANKS
ISSUE DATE:	6/10/24
JOB #:	
PROJECT #:	332-650560594
JOHNSON CONTROLS © 2024	
SYSTEM: FIRE ALARM SYSTEM	
SHEET:	
FL3 DEVICE PLACEMENT PLAN	



DISTRICT - 332
111019 STRANG LINE ROAD
LENEXA, KS 66215
SERVICE- 913.894.0010
PHONE: 913-894-0010
FAX: 913.804.0020



JOHN KNOX VILLAGE COURTYARDS BUILDING E

JOHN KNOX VILLAGE
1001 NW CHIPMAN RD
LEE'S SUMMIT, MO 64081

[illegible]

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JOB #:	
PROJECT #:	332-650560594
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SYSTEM: FIRE ALARM SYSTEM	
SHEET:	

FL4 DEVICE PLACEMENT PLAN

FA-104



SCALE: $1/8" = 1'-0"$ IN FEET



SCALE:N.T.S.

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KEYED NOTES:

JOHN KNOX VILLAGE
1001 NW CHIPMAN RD
LEE'S SUMMIT, MO 64081

[illegible]

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CHECKED BY:	TIM EUBANKS
ISSUE DATE:	6/10/24
JOB #:	
PROJECT #:	332-650560594
JOHNSON CONTROLS © 2024	
SYSTEM:	FIRE ALARM SYSTEM
SHEET:	

FA-201

FILE PATH: C:\Users\jmenendez\OneDrive - Johnson Controls Inc. \My Documents\JLV\ Courtyard\JLV_Courtyard_65056598SheetFA-201.dwg

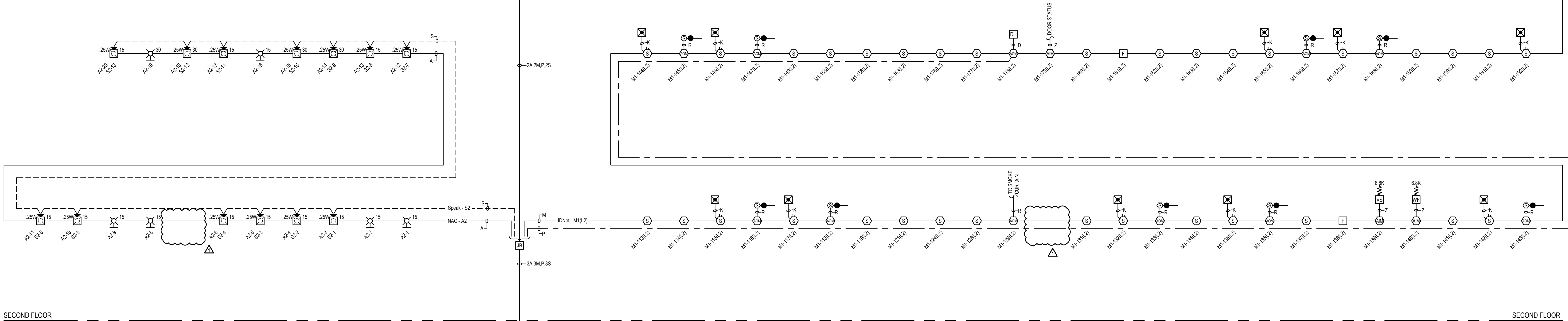
LAST SAVED BY: JEBBANT

LAST PRINTED: 10/22/2024 10:05:15 AM

30" x 42" - Arch E Size

RISER CONTINUES ON FA-202

RISER CONTINUED FROM FA-201



RISER NOTES:

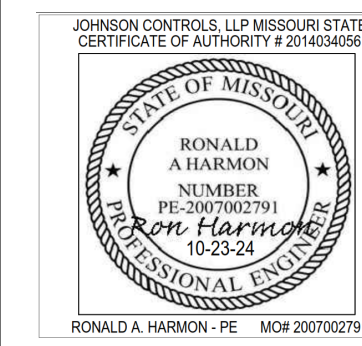
- RISER IS A DIAGRAMMATICAL REPRESENTATION OF THE SYSTEM ARCHITECTURE IN BUILDING CROSS SECTION. IT IS NOT INTENDED TO REPRESENT ACTUAL WIRE RUNS, PANEL CONFIGURATIONS OR PENETRATIONS. REFER TO FLOOR PLANS AND PANEL DETAILS FOR CIRCUIT ROUTING AND CONFIGURATION INFORMATION.
- ALL WIRING SHALL COMPLY WITH APPLICABLE ELECTRICAL CODES. REFER TO 'APPLICABLE CODES & STANDARDS' ON SHEET FA-001 FOR SPECIFIC CODE REFERENCES.

KEYED NOTES:

- ◇ 120VAC PRIMARY POWER SOURCE SHALL BE A MECHANICALLY PROTECTED BRANCH CIRCUIT. THE CIRCUIT DISCONNECTING MEANS SHALL HAVE A RED MARKING, AND BE IDENTIFIED AS "FIRE ALARM CIRCUIT"



918.884.0010
918.884.0000
1015 STRANGE LINE ROAD
LEWIS, MO 64641
SERVICE 918.884.0010



JOHN KNOX VILLAGE COURTYARDS BUILDING E

JOHN KNOX VILLAGE
1001 NW CHIPMAN RD
LEE'S SUMMIT, MO 64081

ISSUE	DATE	BY	CHK	DESCRIPTION
1	10/12/2024	JMS	RP	REVISION FOR 44 DATED 08/12/2024
2	10/22/2024	TLE	MC	REVISION PER DOCUMENT G7-14-2017 ADDING SMOKE TO WALLS

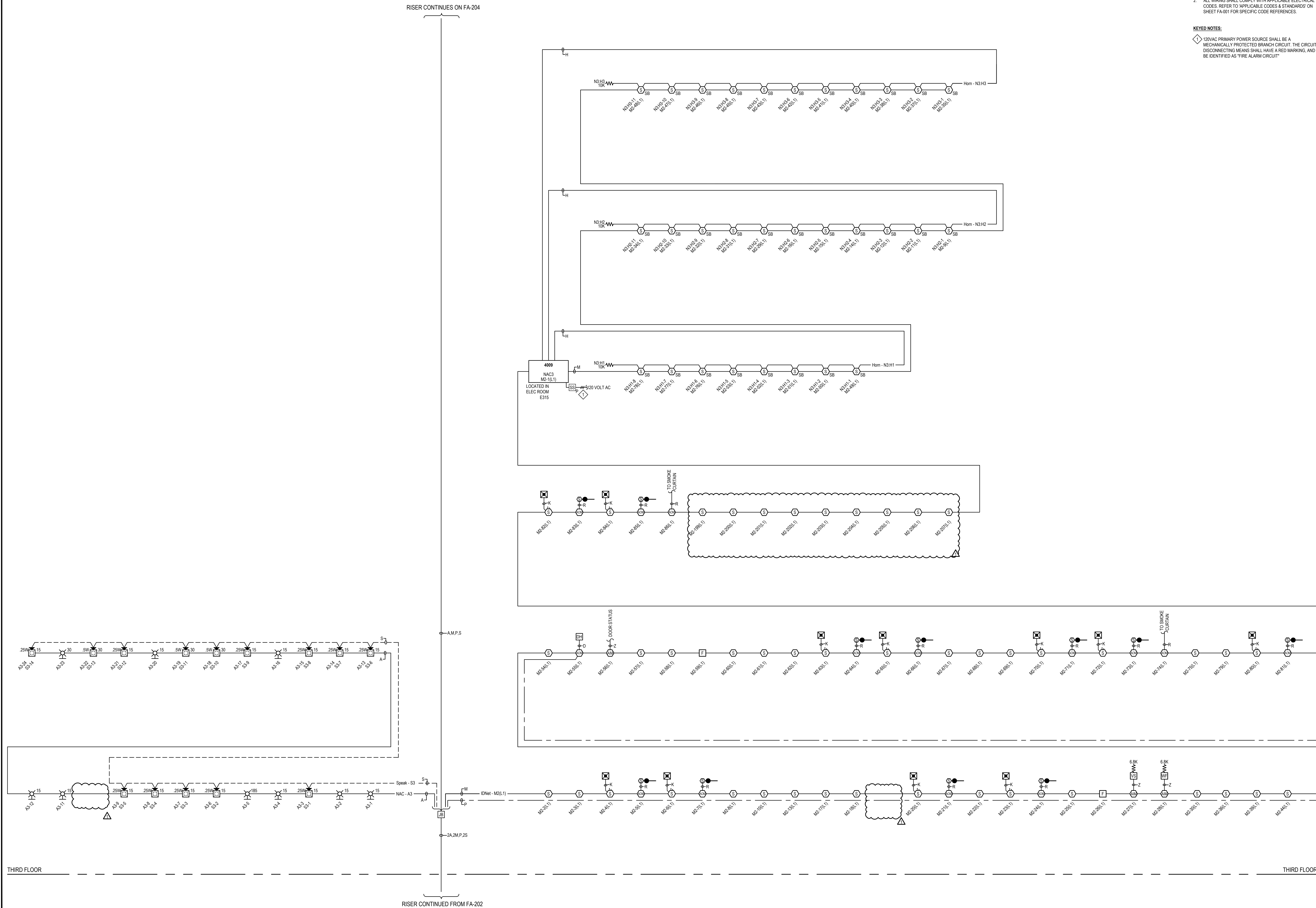
DRAWN BY: MARIANO MENDEZ
CHECKED BY: TIM EUBANKS
ISSUE DATE: 6/10/24
JOB #: 332-650565984
PROJECT #: JOHNSON CONTROLS © 2024

SYSTEM:
FIRE ALARM SYSTEM
SHEET:

RISER DIAGRAM

FA-202

RISER DIAGRAM
SCALE: N.T.S.



RISER DIAGRAM

SCALE:N.T.S.



**Johnson
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DISTRICT - 332

11119 STRANGE LINE ROAD
 PLYMOUTH, MI 48170
 PHONE: 313.884.0010
 FAX: 313.884.0020
 SERVICE: 313.884.0010

JOHNSON CONTROLS U.S. MISSOURI STATE
 CERTIFICATE OF AUTHORITY # 2014582628



RONALD A. HARMON
 SECRETARY
 PE 202877007591
 10-23-2014

RONALD A. HARMON - PE MCR 202877007591

JOHN KNOX VILLAGE COURTYARDS BUILDING E

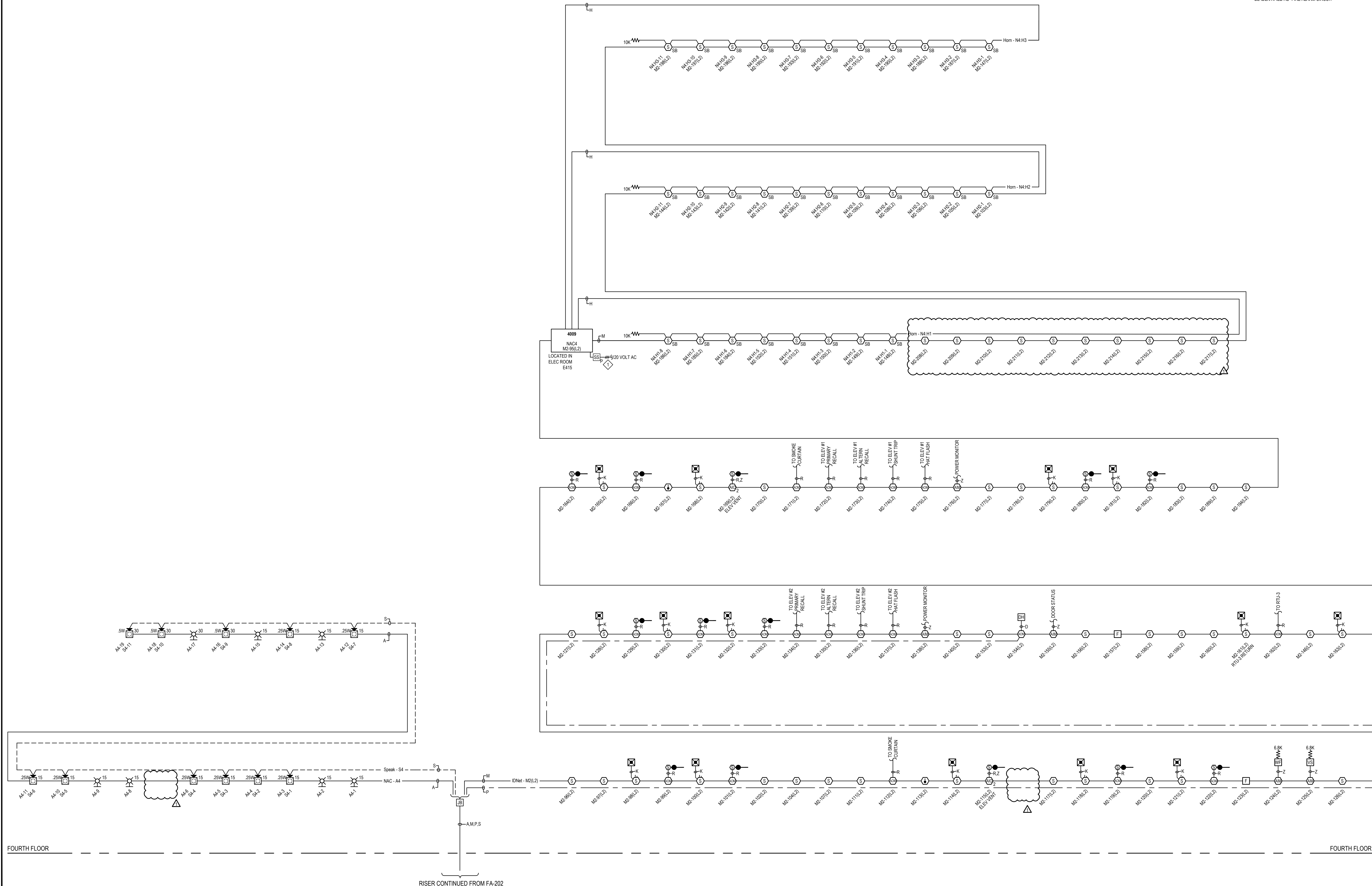
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LEE'S SUMMIT, MO 64081

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ISSUE DATE:	6/10/24
JOB #:	
PROJECT #:	332-650560594
JOHNSON CONTROLS © 2024	
SYSTEM:	
FIRE ALARM SYSTEM	
SHEET:	

RISER DIAGRAM

FA-203



RISER DIAGRAM

SCALE:N.T.S.

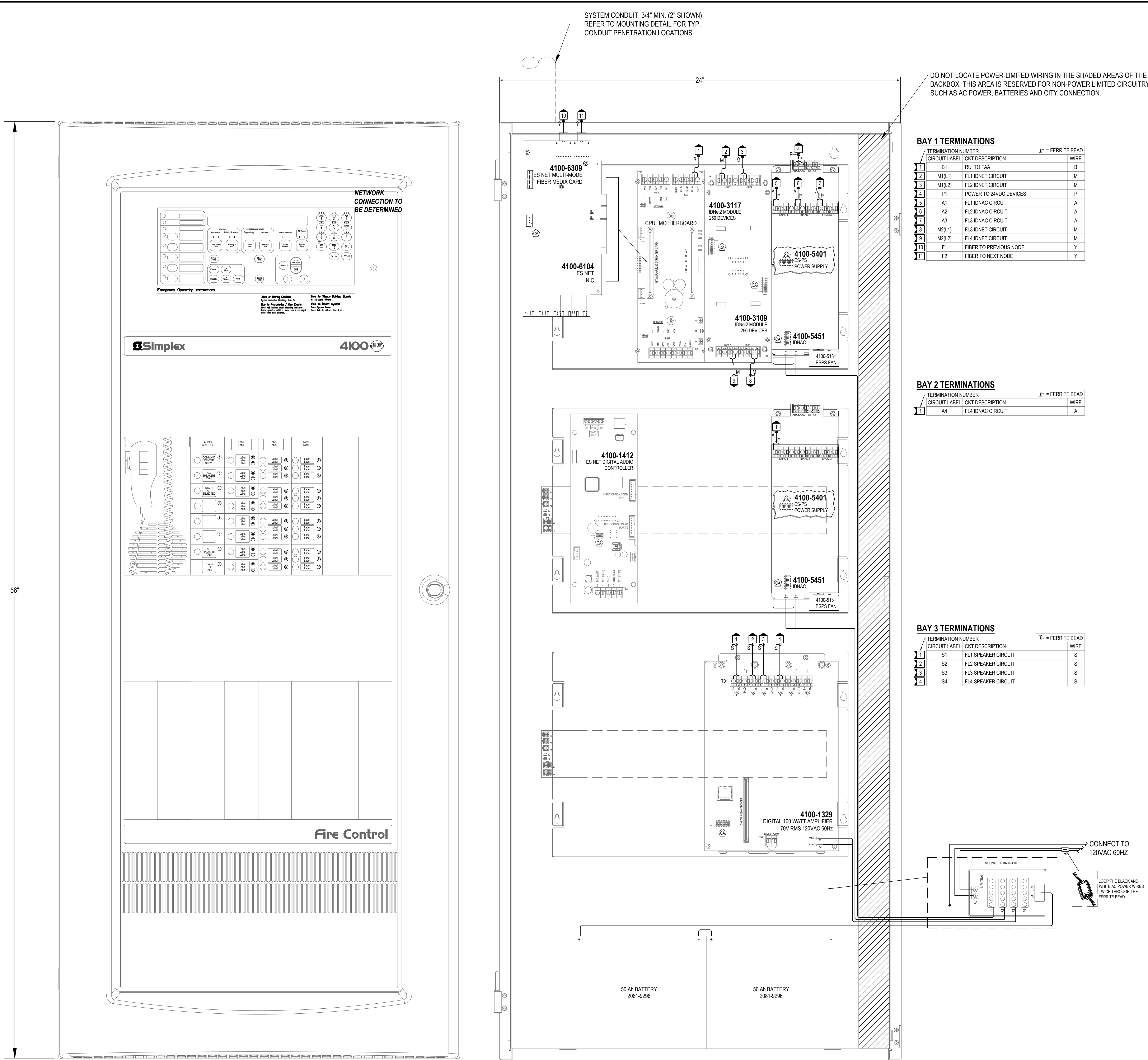
JOHN KNOX VILLAGE
1001 NW CHIPMAN RD
LEE'S SUMMIT, MO 64081

ISSUE	LOG	DATE	CAID	CHK	DESCRIPTION
1		10/1/2024	ATIS	RP	REVISION PER PR #4 DATED 08.12.2024
2		10/22/2024	TUE	MC	REVISION PER DOCUMENT 6747-2017 ADDING SMOCKS TO HALLS

DRAWN BY:	MARIANO MENDEZ
CHECKED BY:	TIM EUBANKS
ISSUE DATE:	6/10/24
JOB #:	
PROJECT #:	332-650560594
JOHNSON CONTROLS © 2024	
SYSTEM: FIRE ALARM SYSTEM	
SHEET:	

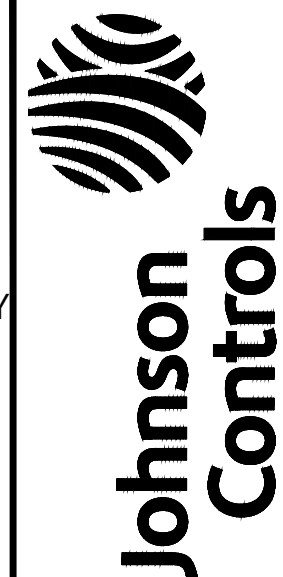
RISER DIAGRAM

FA-204



FIRE ALARM CONTROL PANEL
CABINET #1 - FIRST FLOOR
ELECTRICAL ROOM E115

SCALE: NTS



JOHNSON
Controls

JOHNSON CONTROLS LLP MISSOURI STATE
CERTIFICATE OF AUTHORITY # 00406066

RONALD A. HARMON
NUMBER:
10-23-24
10-23-24
NATIONAL
RONALD A. HARMON, PE, MCH 200702071

DATE: 10/22/2024
1015 STRANG LINE ROAD
LENEXA, KS 66045
SERVICE: 913-666-9010

PHONE: 913-666-0010
FAX: 913-666-0000

JOHN KNOX VILLAGE COURTYARDS BUILDING E

JOHN KNOX VILLAGE
1001 NW CHIPMAN RD
LEE'S SUMMIT, MO 64081

ISSUE NO.	DATE	CHK	DESCRIPTION	REVISION
1	10/11/2024	JMS	PROJ REVISION PER 641 DATED 08/12/2024	
2	10/22/2024	TLE	MC REVISION PER DOCUMENT 674-2017 ADDING SINKS TO WALLS	

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CHECKED BY:	TIM EUBANKS
ISSUE DATE:	6/10/24
JOB #:	332-650560594
PROJECT #:	JOHNSON CONTROLS © 2024
SYSTEM:	FIRE ALARM SYSTEM
SHEET:	
PANEL DETAIL	
FA-501	

4100es FACP

Module	Qty	Description	Standby Current	Total Standby	Alarm Current	Total Alarm
Panel Equipment						
4100-8701	1	ES PS Master Controller - English	1	0.2770	0.2770	0.3210
4100-1294	1	LED/SWITCH SLIDE-IN LABEL KIT		0.0000	0.0000	0.0000
4100-5131	2	ES-PS Fan Module		0.0000	0.0000	0.2000
4100-1412	1	ES NET DIGITAL AUDIO CONTROLLER W/MICROPHONE		0.1000	0.1000	0.1000
4100-1255	1	3-8 CHANNEL AUDIO OPERATOR INTERFACE		0.0000	0.0000	0.0240
4100-1329	1	DIGITAL 100W AMP.8NAC,120VAC,70V		0.0850	0.0850	3.8000
4100-3208	1	4 POINT 10A RELAY CARD WITH FEEDBACK		0.0200	0.0200	0.1880
4100-1292	1	8 SW, 16RDYOL, LED MODULE		0.0000	0.0000	0.0240
4100-1298	1	8464 LED/SWITCH CONTROLLER		0.0000	0.0000	0.2120
4100-5401	1	ES Power Supply Only		0.0680	0.0680	0.0770
4100-5402	1	ES-XPS Expansion Supply		0.0680	0.0680	0.0770
4100-5451	2	IDNAC Card		0.1240	0.2480	0.2300
4100-3109	1	IDNAC2 MODULE - UP TO 250 DEVICES 2 ISOLATED LOOPS		0.0500	0.0500	0.1000
Panel Totals					0.9360	5.7830
IDNet Addressable Devices (SLC)						
4009-9201	4	4009 IDNET NAC EXTENDER, 120 VAC *	Constant current draw of .8mA Standby and 1mA alarm per address used. Devices requiring additional current are accounted for in the section labeled "Miscellaneous Peripheral Devices Requiring Additional System Power".			
4090-9901	26	IDNET SUPERVISED IAM *				
4090-9902	64	IDNET RELAY IAM *				
4090-9908	3	ADDRESSABLE DUAL CONTACT RELAY IAM *				
4090-9118	2	RELAY IDNET 2 IAM WIT SENSE *				
4098-9714	251	TRUEALARM PHOTO SMOKE SENSOR				
4098-9733	3	TRUEALARM HEAT SENSOR				
4098-9755	45	TRUEALARM DUCT SMOKE SENSOR W/O RELAY OUTPUT *				
4098-9770	1	TRUEALARM SENSOR BASE WITH CO MODULE *				
4098-9772	120	TRUEALARM 520HZ SOUNDER BASE W/ REMOTE LED *				
4098-9792	133	TRUEALARM SENSOR BASE *				
4099-9006	13	ADDRESSABLE DOUBLE ACTION MANUAL STATION, PUSH *				
Miscellaneous Peripheral Devices That Require (Additional) System Power						
4603-9101	1	SERIAL LCD ANNUNCIATOR	0.0650	0.0650	0.1400	0.1400
IDNAC Notification Appliances						
			Setting			
49AV-WRF	2	AV WALL MT, RED, FIRE LABEL	30	0.0008	0.0016	0.0670
49SV-APPLW	38	SV APPLIANCE ONLY, WALL MT	15	0.0008	0.0304	0.0470
49SV-APPLW	7	SV APPLIANCE ONLY, WALL MT	30	0.0008	0.0056	0.0670
49SV-APPLW	4	SV APPLIANCE ONLY, WALL MT	75	0.0008	0.0032	0.1000
49VO-WRF	23	VO, WALL MT, RED, FIRE LABEL	15	0.0008	0.0184	0.0470
49VO-WRF	2	VO, WALL MT, RED, FIRE LABEL	185	0.0008	0.0016	0.2080
49VO-WRF	5	VO, WALL MT, RED, FIRE LABEL	30	0.0008	0.0040	0.0570
Total IDNAC Device Current:				0.0648		4.9010
IDNAC Current Boost for 29vdc Regulated Output **						2.5661
Peripheral Totals				0.0650		7.2071
RUI Totals				1	0.0035	0.9035
Address Totals				411 Addresses	0.3288	0.4110
System Totals:				Standby	1.3981	Alarm
* Device Address current draw included below (See Additional Current Draws):						
IDnet cards include 40mA alarm current for 20 device LEDs in alarm in addition to base current listed on datasheet.						
1. Base FACP includes current draw for all included components. See data sheet for details.						
Battery Set #1 (Cabinet/Charger #1)						
Select ALL Power Supplies on this battery set:				Standby Current	Standby Total	Alarm Current
ESPS-1					0.7064	5.1440
ESPS-2					0.2064	1.4030
ESPS-3					0.0680	0.0770
Amp-1					0.0850	3.8000
Sub Total					1.0658	10.4240
Additional Current Draws:						
IDNAC Current Boost for 29vdc Regulated Output **						2.5661
RUI Connected Peripheral Devices				1	x 0.0035	= 0.0035
MAPNET/IDNet Device Address Communication Current				411	x 0.000800	= 0.3288
Sub Total					1.3981	13.4046
Spare addressable point capacity				0%	0	x 0.0008
					= 0.0000	x 0.001
Total					1.3981	13.4046
Standby Time = 24 Hrs				x 1.3981	= 33.5544	Standby Ah
Alarm Time = 15 Min				0.25 x 13.4046	= 3.3511	Alarm Ah
Additional Spare Battery Capacity = 0%					36.9055	
					+ 0.0000	
Battery Discharge Factor = 20%					36.9055	
Minimum Battery Required 2081-9296 50AH (2x)					+ 7.3811	
Battery Supplied 2081-9296 50AH (2x)					44.2867	
* System Totals represent total system current requirements. These currents may be distributed between multiple battery sets or power supplies as shown above.						
** IDNAC Current Boost formula: ((29.5 * IDNac Alarm Current) / 52) / 20.4 = Adjusted Current						
DC-DC Converter Output = 28.5vdc; Terminal Output is 29vdc due to 0.5vdc internal loss.						
Converter Worst Case efficiency is 92%, 20.4vdc represents battery output in 85% depleted state						

4100es FACP

Module	Qty	Description	Standby Current	Total Standby	Alarm Current	Total Alarm
Panel Equipment						
4100-8701	1	ES PS Master Controller - English	1	0.2770	0.2770	0.3210
4100-1294	1	LED/SWITCH SLIDE-IN LABEL KIT		0.0000	0.0000	0.0000
4100-5131	2	ES-PS Fan Module		0.0000	0.0000	0.2000
4100-1412	1	ES NET DIGITAL AUDIO CONTROLLER W/MICROPHONE		0.1000	0.1000	0.1000
4100-1255	1	3-8 CHANNEL AUDIO OPERATOR INTERFACE		0.0000	0.0000	0.0240
4100-1329	1	DIGITAL 100W AMP.8NAC,120VAC,70V		0.0850	0.0850	3.8000
4100-3208	1	4 POINT 10A RELAY CARD WITH FEEDBACK		0.0200	0.0200	0.1880
4100-1292	1	8 SW, 16RDYOL, LED MODULE		0.0000	0.0000	0.0240
4100-1298	1	8464 LED/SWITCH CONTROLLER		0.0000	0.0000	0.2120
4100-5401	1	ES Power Supply Only		0.0680	0.0680	0.0770
4100-5402	1	ES-XPS Expansion Supply		0.0680	0.0680	0.0770
4100-5451	2	IDNAC Card		0.1240	0.2480	0.2300
4100-3109	1	IDNAC2 MODULE - UP TO 250 DEVICES 2 ISOLATED LOOPS		0.0500	0.0500	0.1000
Panel Totals					0.9360	5.7830
IDNet Addressable Devices (SLC)						
4009-9201	4	4009 IDNET NAC EXTENDER, 120 VAC *	Constant current draw of .8mA Standby and 1mA alarm per address used. Devices requiring additional current are accounted for in the section labeled "Miscellaneous Peripheral Devices Requiring Additional System Power".			
4090-9901	26	IDNET SUPERVISED IAM *				
4090-9902	64	IDNET RELAY IAM *				
4090-9908	3	ADDRESSABLE DUAL CONTACT RELAY IAM *				
4090-9118	2	RELAY IDNET 2 IAM WIT SENSE *				
4098-9714	251	TRUEALARM PHOTO SMOKE SENSOR				
4098-9733	3	TRUEALARM HEAT SENSOR				
4098-9755	45	TRUEALARM DUCT SMOKE SENSOR W/O RELAY OUTPUT *				
4098-9770	1	TRUEALARM SENSOR BASE WITH CO MODULE *				
4098-9772	120	TRUEALARM 520HZ SOUNDER BASE W/ REMOTE LED *				
4098-9792	133	TRUEALARM SENSOR BASE *				
4099-9006	13	ADDRESSABLE DOUBLE ACTION MANUAL STATION, PUSH *				
Miscellaneous Peripheral Devices That Require (Additional) System Power						
4603-9101	1	SERIAL LCD ANNUNCIATOR	0.0650	0.0650	0.1400	0.1400
IDNAC Notification Appliances						
			Setting			
49AV-WRF	2	AV WALL MT, RED, FIRE LABEL	30	0.0008	0.0016	0.0670
49SV-APPLW	38	SV APPLIANCE ONLY, WALL MT	15	0.0008	0.0304	0.0470
49SV-APPLW	7	SV APPLIANCE ONLY, WALL MT	30	0.0008	0.0056	0.0670
49SV-APPLW	4	SV APPLIANCE ONLY, WALL MT	75	0.0008	0.0032	0.1000
49VO-WRF	23	VO, WALL MT, RED, FIRE LABEL	15	0.0008	0.0184	0.0470
49VO-WRF	2	VO, WALL MT, RED, FIRE LABEL	185	0.0008	0.0016	0.2080
49VO-WRF	5	VO, WALL MT, RED, FIRE LABEL	30	0.0008	0.0040	0.0570
Total IDNAC Device Current:				0.0648		4.9010
IDNAC Current Boost for 29vdc Regulated Output **						2.5661
Peripheral Totals				0.0650		7.2071
RUI Totals				1	0.0035	0.9035
Address Totals				411 Addresses	0.3288	0.4110
System Totals:				Standby	1.3981	Alarm
* Device Address current draw included below (See Additional Current Draws):						
IDnet cards include 40mA alarm current for 20 device LEDs in alarm in addition to base current listed on datasheet.						
1. Base FACP includes current draw for all included components. See data sheet for details.						
Battery Set #1 (Cabinet/Charger #1)						
Select ALL Power Supplies on this battery set:				Standby Current	Standby Total	Alarm Current
ESPS-1					0.7064	5.1440
ESPS-2					0.2064	1.4030
ESPS-3					0.0680	0.0770
Amp-1					0.0850	3.8000
Sub Total					1.0658	10.4240
Additional Current Draws:						
IDNAC Current Boost for 29vdc Regulated Output **						2.5661
RUI Connected Peripheral Devices				1	x 0.0035	= 0.0035
MAPNET/IDNet Device Address Communication Current				411	x 0.000800	= 0.3288
Sub Total					1.3981	13.4046
Spare addressable point capacity				0%	0	x 0.0008
					= 0.0000	x 0.001
Total					1.3981	13.4046
Standby Time = 24 Hrs				x 1.3981	= 33.5544	Standby Ah
Alarm Time = 15 Min				0.25 x 13.4046	= 3.3511	Alarm Ah
Additional Spare Battery Capacity = 0%					36.9055	
					+ 0.0000	
Battery Discharge Factor = 20%					36.9055	
Minimum Battery Required 2081-9296 50AH (2x)					+ 7.3811	
Battery Supplied 2081-9296 50AH (2x)					44.2867	
* System Totals represent total system current requirements. These currents may be distributed between multiple battery sets or power supplies as shown above.						
** IDNAC Current Boost formula: ((29.5 * IDNac Alarm Current) / 52) / 20.4 = Adjusted Current						
DC-DC Converter Output = 28.5vdc; Terminal Output is 29vdc due to 0.5vdc internal loss.						
Converter Worst Case efficiency is 92%, 20.4vdc represents battery output in 85% depleted state						

4100es FACP

Module	Qty	Description	Standby Current	Total Standby	Alarm Current	Total Alarm
Panel Equipment						
4100-8701	1	ES PS Master Controller - English	1	0.2770	0.2770	0.3210
4100-1294	1	LED/SWITCH SLIDE-IN LABEL KIT		0.0000	0.0000	0.0000
4100-5131	2	ES-PS Fan Module		0.0000	0.0000	0.2000
4100-1412	1	ES NET DIGITAL AUDIO CONTROLLER W/MICROPHONE		0.1000	0.1000	0.1000
4100-1255	1	3-8 CHANNEL AUDIO OPERATOR INTERFACE		0.0000	0.0000	0.0240
4100-1329	1	DIGITAL 100W AMP.8NAC,120VAC,70V		0.0850	0.0850	3.8000
4100-3208	1	4 POINT 10A RELAY CARD WITH FEEDBACK		0.0200	0.0200	0.1880
4100-1292	1	8 SW, 16RDYOL, LED MODULE		0.0000	0.0000	0.0240
4100-1298	1	8464 LED/SWITCH CONTROLLER		0.0000	0.0000	0.2120
4100-5401	1	ES Power Supply Only		0.0680	0.0680	0.0770
4100-5402	1	ES-XPS Expansion Supply		0.0680	0.0680	0.0770
4100-5451	2	IDNAC Card		0.1240	0.2480	0.2300
4100-3109	1	IDNAC2 MODULE - UP TO 250 DEVICES 2 ISOLATED LOOPS		0.0500	0.0500	0.1000
Panel Totals					0.9360	5.7830
IDNet Addressable Devices (SLC)						
4009-9201	4	4009 IDNET NAC EXTENDER, 120 VAC *	Constant current draw of .8mA Standby and 1mA alarm per address used. Devices requiring additional current are accounted for in the section labeled "Miscellaneous Peripheral Devices Requiring Additional System Power".			
4090-9901	26	IDNET SUPERVISED IAM *				
4090-9902	64	IDNET RELAY IAM *				
4090-9908	3	ADDRESSABLE DUAL CONTACT RELAY IAM *				
4090-9118	2	RELAY IDNET 2 IAM WIT SENSE *				
4098-9714	251	TRUEALARM PHOTO SMOKE SENSOR				
4098-9733	3	TRUEALARM HEAT SENSOR				
4098-9755	45	TRUEALARM DUCT SMOKE SENSOR W/O RELAY OUTPUT *				
4098-9770	1	TRUEALARM SENSOR BASE WITH CO MODULE *				
4098-9772	120	TRUEALARM 520HZ SOUNDER BASE W/ REMOTE LED *				
4098-9792	133	TRUEALARM SENSOR BASE *				
4099-9006	13	ADDRESSABLE DOUBLE ACTION MANUAL STATION, PUSH *				
Miscellaneous Peripheral Devices That Require (Additional) System Power						
4603-9101	1	SERIAL LCD ANNUNCIATOR	0.0650	0.0650	0.1400	0.1400
IDNAC Notification Appliances						
			Setting			
49AV-WRF	2	AV WALL MT, RED, FIRE LABEL	30	0.0008	0.0016	0.0670
49SV-APPLW	38	SV APPLIANCE ONLY, WALL MT	15	0.0008	0.0304	0.0470
49SV-APPLW	7	SV APPLIANCE ONLY, WALL MT	30	0.0008	0.0056	0.0670
49SV-APPLW	4	SV APPLIANCE ONLY, WALL MT	75	0.0008	0.0032	0.1000
49VO-WRF	23	VO, WALL MT, RED, FIRE LABEL	15	0.0008	0.0184	0.0470
49VO-WRF	2	VO, WALL MT, RED, FIRE LABEL	185	0.0008	0.0016	0.2080
49VO-WRF	5	VO, WALL MT, RED, FIRE LABEL	30	0.0008	0.0040	0.0570
Total IDNAC Device Current:				0.0648		4.9010
IDNAC Current Boost for 29vdc Regulated Output **						2.5661
Peripheral Totals				0.0650		7.2071
RUI Totals				1	0.0035	0.9035
Address Totals				411 Addresses	0.3288	0.4110
System Totals:				Standby	1.3981	Alarm
* Device Address current draw included below (See Additional Current Draws):						
IDnet cards include 40mA alarm current for 20 device LEDs in alarm in addition to base current listed on datasheet.						
1. Base FACP includes current draw for all included components. See data sheet for details.						
Battery Set #1 (Cabinet/Charger #1)						
Select ALL Power Supplies on this battery set:				Standby Current	Standby Total	Alarm Current
ESPS-1					0.7064	5.1440
ESPS-2					0.2064	1.4030
ESPS-3					0.0680	0.0770
Amp-1					0.0850	3.8000
Sub Total					1.0658	10.4240
Additional Current Draws:						
IDNAC Current Boost for 29vdc Regulated Output **						2.5661
RUI Connected Peripheral Devices				1	x 0.0035	= 0.0035
MAPNET/IDNet Device Address Communication Current				411	x 0.000800	= 0.3288
Sub Total					1.3981	13.4046
Spare addressable point capacity				0%	0	x 0.0008
					= 0.0000	x 0.001
Total					1.3981	13.4046
Standby Time = 24 Hrs				x 1.3981	= 33.5544	Standby Ah
Alarm Time = 15 Min				0.25 x 13.4046	= 3.3511	Alarm Ah
Additional Spare Battery Capacity = 0%					36.9055	
					+ 0.0000	
Battery Discharge Factor = 20%					36.9055	
Minimum Battery Required 2081-9296 50AH (2x)					+ 7.3811	
Battery Supplied 2081-9296 50AH (2x)					44.2867	
* System Totals represent total system current requirements. These currents may be distributed between multiple battery sets or power supplies as shown above.						
** IDNAC Current Boost formula: ((29.5 * IDNac Alarm Current) / 52) / 20.4 = Adjusted Current						
DC-DC Converter Output = 28.5vdc; Terminal Output is 29vdc due to 0.5vdc internal loss.						
Converter Worst Case efficiency is 92%, 20.4vdc represents battery output in 85% depleted state						

INNET CHANNEL M1				ADDRESSES IN USE: 196 (76.4%) SPARE ADDRESSES: 54 (21.6%)										SWITCH SETTINGS							
Address	Device Type	Point Type	Location Description		1	2	3	4	5	6	7	8									
M1-1	4008A	SIGNAL	FL1 ELEC E115 NAC	M1-1	X											ON					
M1-2	PHOTO	SMOKE	FL1 ELEC E115 BY FACP	M1-2	X											ON					
M1-3	PHOTO	SMOKE	FL1 HSKP E117	M1-3	X	X										ON					
M1-4	PHOTO	SMOKE	FL1 MEP E118	M1-4			X									ON					
M1-5	SPHOTO	SMOKE	FL1 UNIT C - CEDAR E119 LOBBY	M1-5	X											ON					
M1-6	PHOTO	SMOKE	FL1 UNIT C - CEDAR E119 DEN	M1-6	X	X	X									ON					
M1-7	SPHOTO	SMOKE	FL1 UNIT C - CEDAR E119 BEDROOM	M1-7	X	X	X									ON					
M1-8	PHOTO	SMOKE	FL1 UNIT C - CEDAR E121 BEDROOM	M1-8		X										ON					
M1-9	PHOTO	SMOKE	FL1 UNIT C - CEDAR E121 DEN	M1-9	X		X									ON					
M1-10	SPHOTO	SMOKE	FL1 UNIT C - CEDAR E121 LOBBY	M1-10	X											ON					
M1-11	SPHOTO	SMOKE	FL1 UNIT B - BIRCH (ADA) E123 LOBBY	M1-11	X	X										ON					
M1-12	PHOTO	SMOKE	FL1 UNIT B - BIRCH (ADA) E123 BEDRM	M1-12		X	X									ON					
M1-13	IAM	SO	FL1 RES. CLOSET E126 VS 1	M1-13	X	X	X									ON					
M1-14	IAM	SO	FL1 RES. CLOSET E126 VS 2	M1-14	X	X	X									ON					
M1-15	PHOTO	SMOKE	FL1 RES. CLOSET E126	M1-15	X	X	X	X								ON					
M1-16	PHOTO	SMOKE	FL1 LOBBY E125	M1-16					X							ON					
M1-17	RIAM	RELAY	FL1 LOBBY E125 SMOKE CURTAIN	M1-17	X					X						ON					
M1-18	PHOTO	LSDUCT	FL1 LOBBY E125 BY E131 DUCT	M1-18		X										ON					
M1-19	RIAM	RELAY	FL1 LOBBY E125 BY E131 DUCT RELAY	M1-19	X	X	X									ON					
M1-20	IAM	SO	FL1 TRASHRECYCLE E131 VS 1	M1-20		X	X									ON					
M1-21	IAM	SO	FL1 TRASHRECYCLE E131 VS 2	M1-21	X	X	X									ON					
M1-22	IAM	SO	FL1 TRASHRECYCLE E131 VS 3	M1-22	X	X	X									ON					
M1-23	IAM	WATER	FL1 TRASHRECYCLE E131 WF	M1-23	X	X	X	X								ON					
M1-24	MCOP	UTILITY	FL1 TRASHRECYCLE E131 CO	M1-24		X	X									ON					
M1-25	PHOTO	LSDUCT	FL1 TRASHRECYCLE E131 DUCT	M1-25	X		X	X								ON					
M1-26	RIAM	RELAY	FL1 TRASHRECYCLE E131 DUCT RELAY	M1-26	X		X	X	X							ON					
M1-27	PHOTO	SMOKE	FL1 COMM E127	M1-27	X	X	X	X								ON					
M1-28	PHOTO	LSDUCT	FL1 STAIR #2 E128 DUCT	M1-28		X	X	X								ON					
M1-29	RIAM	RELAY	FL1 STAIR #2 E128 DUCT RELAY	M1-29	X		X	X								ON					
M1-30	ADRPUPL	PULL	FL1 STAIR #2 E128	M1-30	X	X	X	X								ON					
M1-31	IAM	SO	FL1 STAIR #2 E128 VS	M1-31	X	X	X	X	X							ON					
M1-32	IAM	WATER	FL1 STAIR #2 E128 WF	M1-32						X						ON					
M1-33	ADRPUPL	PULL	FL1 STAIR #2 E128 BY EXIT	M1-33	X					X						ON					
M1-34	PHOTO	SMOKE	FL1 STOR E129	M1-34		X	X									ON					
M1-35	IAM	WATER	FL1 STOR E129 WF	M1-35	X	X	X									ON					
M1-36	IAM	SO	FL1 STOR E129 VS	M1-36	X		X	X								ON					
M1-37	PHOTO	LSDUCT	FL1 STOR E129 DUCT S	M1-37	X		X	X								ON					
M1-38	RIAM	RELAY	FL1 STOR E129 DUCT RELAY S	M1-38	X	X	X									ON					
M1-39	PHOTO	LSDUCT	FL1 STOR E129 DUCT N	M1-39	X	X	X									ON					
M1-40	RIAM	RELAY	FL1 STOR E129 DUCT RELAY N	M1-40	X	X	X	X								ON					
M1-41	SPHOTO	SMOKE	FL1 UNIT C - CEDAR E133 BEDROOM	M1-41	X	X	X									ON					
M1-42	PHOTO	SMOKE	FL1 UNIT C - CEDAR E133 DEN	M1-42	X	X	X									ON					
M1-43	SPHOTO	SMOKE	FL1 UNIT C - CEDAR E133 LOBBY	M1-43	X	X	X									ON					
M1-44	SPHOTO	SMOKE	FL1 UNIT D1 - HICKORY E135 LOBBY	M1-44	X	X	X									ON					
M1-45	SPHOTO	SMOKE	FL1 UNIT D1 - HICKORY E135 BEDROOM	M1-45	X	X	X									ON					
M1-46	SPHOTO	SMOKE	FL1 UNIT D1 - HICKORY E135 BEDRM 2	M1-46	X	X	X	X								ON					
M1-47	PHOTO	SMOKE	FL1 UNIT C - CEDAR E116 LOBBY	M1-47	X	X	X	X								ON					
M1-48	PHOTO	SMOKE	FL1 UNIT C - CEDAR E116 DEN	M1-48	X	X	X	X								ON					
M1-49	SPHOTO	SMOKE	FL1 UNIT C - CEDAR E116 BEDROOM	M1-49	X	X	X									ON					
M1-50	SPHOTO	SMOKE	FL1 UNIT C - CEDAR E122 BEDROOM	M1-50		X		X	X							ON					
M1-51	PHOTO	SMOKE	FL1 UNIT C - CEDAR E122 DEN	M1-51	X		X	X								ON					
M1-52	SPHOTO	SMOKE	FL1 UNIT C - CEDAR E122 LOBBY	M1-52	X	X	X									ON					
M1-53	SPHOTO	SMOKE	FL1 UNIT B - BIRCH E124 BEDROOM	M1-53	X	X	X									ON					
M1-54	SPHOTO	SMOKE	FL1 UNIT B - BIRCH E124 LOBBY	M1-54	X	X	X									ON					
M1-55	SPHOTO	SMOKE	FL1 UNIT C - CEDAR E132 BEDROOM	M1-55	X	X	X	X								ON					
M1-56	PHOTO	SMOKE	FL1 UNIT C - CEDAR E132 DEN	M1-56		X	X	X								ON					
M1-57	SPHOTO	SMOKE	FL1 UNIT C - CEDAR E132 LOBBY	M1-57	X	X	X	X								ON					
M1-58	PHOTO	SMOKE	FL1 UNIT D1 - HICKORY E134 LOBBY	M1-58	X	X	X	X								ON					
M1-59	SPHOTO	SMOKE	FL1 UNIT D1 - HICKORY E134 BEDRM 2	M1-59	X	X	X	X	X							ON					
M1-60	SPHOTO	SMOKE	FL1 UNIT D1 - HICKORY E134 BEDRM 1	M1-60	X	X	X	X								ON					
M1-61	SPHOTO	SMOKE	FL1 UNIT B - BIRCH E114 LOBBY	M1-61	X	X	X	X	X							ON					
M1-62	SPHOTO	SMOKE	FL1 UNIT B - BIRCH E114 BEDROOM	M1-62	X	X	X	X	X							ON					
M1-63	PHOTO	SMOKE	FL1 UNIT D3 - CYPRESS E112 LOBBY	M1-63	X	X	X	X	X	X						ON					
M1-64	SPHOTO	SMOKE	FL1 UNIT D3 - CYPRESS E112 BEDRM 2	M1-64							X					ON					
M1-65	SPHOTO	SMOKE	FL1 UNIT D3 - CYPRESS E112 BEDRM 1	M1-65	X						X					ON					
M1-66	SPHOTO	SMOKE	FL1 UNIT D2 - WILLOW E111 LOBBY	M1-66	X						X					ON					
M1-67	PHOTO	SMOKE	FL1 UNIT D2 - WILLOW E111 BEDROOM 2	M1-67	X		X				X					ON					
M1-68	PHOTO	SMOKE	FL1 UNIT D2 - WILLOW E111 BEDROOM 1	M1-68		X					X					ON					
M1-69	ADRPUPL	PULL	FL1 LOBBY E125 BY EXIT	M1-69	X		X				X					ON					
M1-70	PHOTO	SMOKE	FL1 CORR BY E108	M1-70	X	X	X									ON					
M1-71	RIAM	SHOLDER	FL1 CORR BY STAIR 1 E107	M1-71	X	X	X	X								ON					
M1-72	IAM	SUPERV	FL1 CORR BY E107 DOOR STATUS	M1-72		X										ON					
M1-73	ADRPUPL	PULL	FL1 VESTIBULE E108	M1-73	X		X				X					ON					
M1-74	PHOTO	SMOKE	FL1 CORR BY E106	M1-74	X		X				X					ON					
M1-75	ADRPUPL	PULL	FL1 CORR BY E106	M1-75	X		X				X					ON					
M1-76	ADRPUPL	PULL	FL1 STAIR #1 BY EXIT	M1-76		X										ON					
M1-77	PHOTO	SMOKE	FL1 RESTROOM E105	M1-77	X	X	X	X								ON					
M1-78	IAM	SO	FL1 VS BY RESTROOM E105	M1-78	X	X	X	X								ON					
M1-79	PHOTO	SMOKE	FL1 ATRIUM E101 SOUTH EAST	M1-79	X	X	X	X								ON					
M1-80	PHOTO	SMOKE	FL1 RES. CLOSET E102	M1-80	X				X							ON					
M1-81	PHOTO	LSDUCT	FL1 RES. CLOSET E102 DUCT E	M1-81	X				X							ON					
M1-82	RIAM	RELAY	FL1 RES. CLOSET E102 DUCT RELAY E	M1-82	X				X	X						ON					
M1-83	PHOTO	LSDUCT	FL1 RES. CLOSET E102 DUCT W	M1-83	X	X			X							ON					
M1-84	RIAM	RELAY	FL1 RES. CLOSET E102 DUCT RELAY W	M1-84	X				X	X						ON					
M1-85	PHOTO	SMOKE	FL1 CORR BY E102 W	M1-85	X		X		X							ON					
M1-86	RIAM	RELAY	FL1 STAIR COROR CONTROLLER	M1-86	X		X		X							ON					
M1-87	SO	SO	FL1 S STAIR VS	M1-87	X		X		X							ON					
M1-88	PHOTO	SMOKE	FL1 ATRIUM E101 NORTH	M1-88		X	X	X								ON					
M1-89	PHOTO	SMOKE	FL1 MAIL ROOM/LOUNGE E106	M1-89	X	X	X	X								ON					
M1-90	PHOTO	LSDUCT	FL1 MAIL ROOM/LOUNGE E106 DUCT S	M1-90	X	X	X	X	X							ON					
M1-91	RIAM	RELAY	FL1 MAIL ROOM E106 DUCT RELAY S	M1-91	X	X	X	X	X							ON					
M1-92	PHOTO	LSDUCT	FL1 MAIL ROOM/LOUNGE E106 DUCT N	M1-92	X	X	X	X	X							ON					
M1-93	RIAM	RELAY	FL1 MAIL ROOM E106 DUCT RELAY N	M1-93	X	X	X	X	X							ON					
M1-94	ADRPUPL	PULL	FL1 ATRIUM E101 BY E104	M1-94	X	X	X	X	X							ON					
M1-95	PHOTO	SMOKE	FL1 ATRIUM E101 ELEV LOBBY	M1-95	X	X	X	X	X							ON					
M1-96	RIAM	RELAY	FL1 BY ELEV #1 E103 SMOKE CURTAIN	M1-96					X	X						ON					
M1-97	SO	SO	FL1 BY ELEV #1 E103 VS	M1-97	X											ON					
M1-98	IAM	WATER	FL1 BY ELEV E103 WF	M1-98	X				X	X						ON					
M1-99	RIAM	RELAY	FL1 VEST E104 DOOR CONTROLLER 1	M1-99	X	X	X	X								ON					
M1-100	RIAM	RELAY	FL1 VEST E104 DOOR CONTROLLER 2	M1-100		X	X	X	X							ON					
M1-101	RIAM	RELAY	FL1 VEST E104 SMOKE EVAC TO HVAC	M1-101	X	X	X	X	X							ON					
M1-102	HEAT	HEAT	FL1 ELEVATOR PIT	M1-102		X										ON					
M1-103	PHOTO	SMOKE	FL1 MAIL ROOM/LOUNGE E106	M1-103	X	X	X	X	X							ON					
M1-104	PHOTO	SMOKE	FL1 CORR BY E111	M1-104					X	X						ON					
M1-105	PHOTO	SMOKE	FL1 CORR BY E112	M1-105	X				X	X						ON					
M1-106	PHOTO	SMOKE	FL1 CORR BY E119	M1-106	X				X	X	X					ON					
M1-107	PHOTO	SMOKE	FL1 CORR BY E119	M1-107					X	X						ON					
M1-108	PHOTO	SMOKE	FL1 CORR BY E121	M1-108					X	X	X					ON					
M1-109	PHOTO	SMOKE	FL1 CORR BY E123	M1-109	X				X	X	X					ON					
M1-110	PHOTO	SMOKE	FL1 CORR BY E127	M1-110	X	X	X	X	X							ON					
M1-111	PHOTO	SMOKE	FL1 CORR BY E133	M1-111	X	X	X	X	X	X						ON					
M1-112	4008A	SIGNAL	FL2 ELEC E215 NAC	M1-112					X	X	X					ON					
M1-113	PHOTO	SMOKE	FL2 ELEC E215	M1-113	X				X	X	X					ON					
M1-114	PHOTO	SMOKE	FL2 HSKP E217	M1-114	X				X	X	X					ON					
M1-115																					

M1-126	SPHOTO	SMOKE	FL2 UNIT B -BIRCH E223 LOBBY	M1-126	X	X	X	X	X	ON
M1-127	SPHOTO	SMOKE	FL2 UNIT B -BIRCH E223 BEDROOM	M1-127	X	X	X	X	X	ON
M1-128	PHOTO	SMOKE	FL2 LOBBY E225 BY ELEV 2	M1-128						
M1-129	RIAM	RELAY	FL2 LOBBY E225 SMOKE CURTAIN	M1-129	X					
M1-130					X					
M1-131	PHOTO	SMOKE	FL2 TRASH/RECYCLE E201	M1-131	X					
M1-132	PHOTO	LSDUCT	FL2 LOBBY E225 BY E221 DUCT	M1-132	X					
M1-133	SOB	RELAY	FL2 LOBBY E225 BY E221 DUCT RELAY	M1-133	X					
M1-134	PHOTO	SMOKE	FL2 COMM E227	M1-134	X					
M1-135	PHOTO	LSDUCT	FL2 STAIR #2 E228 DUCT	M1-135	X	X				
M1-136	RIAM	RELAY	FL2 STAIR #2 E228 DUCT RELAY	M1-136		X				
M1-137	PHOTO	SMOKE	FL2 RES. CLOSET E226	M1-137	X					
M1-138	ADRPUL	FULL	FL2 CORR BY STAIR #2 E228	M1-138	X	X				
M1-139	IAM	SO	FL2 STAIR #2 E228 VS	M1-139	X	X				
M1-140	IAM	WATER	FL2 STAIR #2 E228 WF	M1-140	X	X				
M1-141	PHOTO	SMOKE	FL2 TRASH / REC E229	M1-141	X	X				
M1-142	PHOTO	LSDUCT	FL2 TRASH / REC E229 DUCT S	M1-142	X	X				
M1-143	RIAM	RELAY	FL2 TRASH / REC E229 DUCT RELAY S	M1-143	X	X				
M1-144	PHOTO	LSDUCT	FL2 TRASH / REC E229 DUCT N	M1-144	X					
M1-145	RIAM	RELAY	FL2 TRASH / REC E229 DUCT RELAY N	M1-145	X					
M1-146	PHOTO	LSDUCT	FL2 TRASH / REC E229 DUCT E	M1-146	X	X				
M1-147	RIAM	RELAY	FL2 TRASH / REC E229 DUCT RELAY E	M1-147	X	X				
M1-148	SPHOTO	SMOKE	FL2 UNIT C -CEDAR E232 LOBBY	M1-148	X	X				
M1-149	PHOTO	SMOKE	FL2 UNIT C -CEDAR E233 DEN	M1-149	X	X				
M1-150	SPHOTO	SMOKE	FL2 UNIT C -CEDAR E233 LOBBY	M1-150	X	X				
M1-151	SPHOTO	SMOKE	FL2 UNIT D1 -HICKORY E235 LOBBY	M1-151	X	X				
M1-152	SPHOTO	SMOKE	FL2 UNIT D1 -HICKORY E235 BEDRM 2	M1-152	X	X				
M1-153	SPHOTO	SMOKE	FL2 UNIT D1 -HICKORY E235 BEDRM 1	M1-153	X	X				
M1-154	SPHOTO	SMOKE	FL2 UNIT C -CEDAR E216 LOBBY	M1-154	X	X				
M1-155	PHOTO	SMOKE	FL2 UNIT C -CEDAR E216 DEN	M1-155	X	X				
M1-156	SPHOTO	SMOKE	FL2 UNIT C -CEDAR E216 BEDROOM	M1-156	X	X				
M1-157	SPHOTO	SMOKE	FL2 UNIT C -CEDAR E222 BEDROOM	M1-157	X	X				
M1-158	PHOTO	SMOKE	FL2 UNIT C -CEDAR E222 DEN	M1-158	X	X				
M1-159	SPHOTO	SMOKE	FL2 UNIT C -CEDAR E222 LOBBY	M1-159	X	X				
M1-160	SPHOTO	SMOKE	FL2 UNIT B -BIRCH E224 LOBBY	M1-160						
M1-161	SPHOTO	SMOKE	FL2 UNIT B -BIRCH E224 BEDROOM	M1-161	X					
M1-162	SPHOTO	SMOKE	FL2 UNIT C -CEDAR E232 BEDROOM	M1-162	X					
M1-163	PHOTO	SMOKE	FL2 UNIT C -CEDAR E232 DEN	M1-163	X					
M1-164	SPHOTO	SMOKE	FL2 UNIT C -CEDAR E232 LOBBY	M1-164	X					
M1-165	SPHOTO	SMOKE	FL2 UNIT D1 -HICKORY E234 LOBBY	M1-165	X	X				
M1-166	SPHOTO	SMOKE	FL2 UNIT D1 -HICKORY E234 BEDRM 2	M1-166	X	X				
M1-167	SPHOTO	SMOKE	FL2 UNIT D1 -HICKORY E234 BEDRM 1	M1-167	X	X				
M1-168	SPHOTO	SMOKE	FL2 UNIT B -BIRCH E214 BEDROOM	M1-168		X				
M1-169	SPHOTO	SMOKE	FL2 UNIT B -BIRCH E214 LOBBY	M1-169	X	X				
M1-170	SPHOTO	SMOKE	FL2 UNIT D3 -CYPRESS E212 LOBBY	M1-170	X	X				
M1-171	SPHOTO	SMOKE	FL2 UNIT D3 -CYPRESS E212 BEDRM 2	M1-171	X	X				
M1-172	SPHOTO	SMOKE	FL2 UNIT D3 -CYPRESS E212 BEDRM 1	M1-172	X	X				
M1-173	SPHOTO	SMOKE	FL2 UNIT D2 -WILLOW E211 LOBBY	M1-173	X	X				
M1-174	SPHOTO	SMOKE	FL2 UNIT D2 -WILLOW E211 BEDRM 2	M1-174	X	X				

IDNET CHANNEL M2			ADDRESSES IN USE: 187 (74.8%) SPARE ADDRESSES: 63 (25.2%)										SWITCH SETTINGS							
Address	Device Type	Point Type	Location Description										1	2	3	4	5	6	7	8
M2-1	4009A8	SIGNAL	FL3 ELEC E315 NAC										M2-1	X						ON
M2-2	PHOTO	SMOKE	FL3 ELEC E315										M2-2	X						ON
M2-3	PHOTO	SMOKE	FL3 HSKP E317										M2-3	X						ON
M2-4	PHOTO	LSDUCT	FL3 MEP E318 DUCT S										M2-4		X					ON
M2-5	RIAM	RELAY	FL3 MEP E318 DUCT RELAY S										M2-5	X						ON
M2-6	PHOTO	LSDUCT	FL3 MEP E318 DUCT N										M2-6	X						ON
M2-7	RIAM	RELAY	FL3 MEP E318 DUCT RELAY N										M2-7	X						ON
M2-8	PHOTO	SMOKE	FL3 MEP E318										M2-8		X					ON
M2-9	SPHOTO	SMOKE	FL3 UNIT C CEDAR E319 LOBBY										M2-9	X						ON
M2-10	PHOTO	SMOKE	FL3 UNIT C CEDAR E319 DEN										M2-10	X		X				ON
M2-11	SPHOTO	SMOKE	FL3 UNIT C CEDAR E319 BEDROOM										M2-11	X		X				ON
M2-12	PHOTO	SMOKE	FL3 UNIT C CEDAR E321 BEDROOM										M2-12		X					ON
M2-13	PHOTO	SMOKE	FL3 UNIT C CEDAR E321 DEN										M2-13	X		X				ON
M2-14	SPHOTO	SMOKE	FL3 UNIT C CEDAR E321 LOBBY										M2-14	X		X	X			ON
M2-15	SPHOTO	SMOKE	FL3 UNIT B BIRCH E323 LOBBY										M2-15	X		X	X	X		ON
M2-16	SPHOTO	SMOKE	FL3 UNIT B BIRCH E323 BEDROOM										M2-16	X		X	X	X		ON
M2-17	PHOTO	SMOKE	FL3 LOBBY E325 BY ELEV										M2-17	X						ON
M2-18	PHOTO	SMOKE	FL4 UNASSIGNED E336										M2-18	X		X				ON
M2-19	PHOTO	LSDUCT	FL3 LOBBY E335 BY E336 DUCT										M2-19		X	X				ON
M2-20	RIAM	RELAY	FL3 LOBBY E335 BY E336 DUCT RELAY										M2-20		X	X				ON
M2-21	PHOTO	SMOKE	FL3 COMM E337										M2-22		X	X				ON
M2-22	PHOTO	LSDUCT	FL3 RES CLOSET E326 DUCT										M2-23	X		X	X			ON
M2-23	PHOTO	LSDUCT	FL3 RES CLOSET E326 DUCT RELAY										M2-24		X	X	X			ON
M2-24	RIAM	RELAY	FL3 RES CLOSET E326										M2-25	X		X	X			ON
M2-25	PHOTO	SMOKE	FL3 CORR BY STAIR #2 E328										M2-26		X	X				ON
M2-26	ADRPUK	PULL	FL3 STAIR #2 E328 VS										M2-27	X		X	X			ON
M2-27	IAM	SO	FL3 STAIR #2 E328 WF										M2-28		X	X				ON
M2-28	IAM	WATER	FL3 UNIT C CEDAR E333 BEDROOM										M2-29	X		X	X			ON
M2-29	SPHOTO	SMOKE	FL3 UNIT C CEDAR E333 DEN										M2-30	X		X	X			ON
M2-30	PHOTO	SMOKE	FL3 UNIT C CEDAR E333 LOBBY										M2-31	X		X	X			ON
M2-31	SPHOTO	SMOKE	FL3 UNIT D1 HICKORY E335 LOBBY										M2-32		X			X		ON
M2-32	SPHOTO	SMOKE	FL3 UNIT D1 HICKORY E335 BEDRM 2										M2-33	X				X		ON
M2-33	SPHOTO	SMOKE	FL3 UNIT D1 HICKORY E335 BEDRM 1										M2-34		X			X		ON
M2-34	SPHOTO	SMOKE	FL3 UNIT C CEDAR (ADA) E316 LOBBY										M2-35	X		X				ON
M2-35	PHOTO	SMOKE	FL3 UNIT C CEDAR (ADA) E316 DEN										M2-36		X		X			ON
M2-36	PHOTO	SMOKE	FL3 UNIT C CEDAR (ADA) E316 BEDRM										M2-37	X		X				ON
M2-37	SPHOTO	SMOKE	FL3 UNIT C CEDAR E322 BEDROOM										M2-38		X	X				ON
M2-38	SPHOTO	SMOKE	FL3 UNIT C CEDAR E322 DEN										M2-39	X		X	X			ON
M2-39	PHOTO	SMOKE	FL3 UNIT C CEDAR E322 LOBBY										M2-40		X		X			ON
M2-40	SPHOTO	SMOKE	FL3 UNIT B BIRCH E324 LOBBY										M2-41	X		X				ON
M2-41	SPHOTO	SMOKE	FL3 UNIT B BIRCH E324 BEDROOM										M2-42		X		X			ON
M2-42	SPHOTO	SMOKE	FL3 UNIT C CEDAR E332 BEDROOM										M2-43		X	X				ON
M2-43	SPHOTO	SMOKE	FL3 UNIT C CEDAR E332 DEN										M2-44	X		X	X			ON
M2-44	PHOTO	SMOKE	FL3 UNIT C CEDAR E332 LOBBY										M2-45	X		X	X			ON
M2-45	SPHOTO	SMOKE	FL3 UNIT D1 HICKORY E334 LOBBY										M2-46		X	X				ON
M2-46	SPHOTO	SMOKE	FL3 UNIT D1 HICKORY E334 BEDRM 2										M2-47	X		X	X			ON
M2-47	SPHOTO	SMOKE	FL3 UNIT D1 HICKORY E334 BEDRM 1										M2-48		X		X			ON
M2-48	SPHOTO	SMOKE	FL3 UNIT B BIRCH E334 BEDROOM										M2-49	X		X				ON
M2-49	SPHOTO	SMOKE	FL3 UNIT B BIRCH E334 LOBBY										M2-50	X		X	X			ON
M2-50	SPHOTO	SMOKE	FL3 UNIT D3 CYPRESS E312 BEDROOM										M2-51	X		X	X			ON
M2-51	SPHOTO	SMOKE	FL3 UNIT D3 CYPRESS E312 LOBBY										M2-52		X	X				ON
M2-52	SPHOTO	SMOKE	FL3 UNIT D3 CYPRESS E312 BEDRM 1										M2-53	X		X	X			ON
M2-53	SPHOTO	SMOKE	FL3 CORR BY STORAGE E308										M2-54	X		X	X			ON
M2-54	PHOTO	SMOKE	FL3 CORR BY E308 DH										M2-55	X		X	X			ON
M2-55	RIAM	DHOLDER	FL3 CORR BY E308 DOOR STATUS										M2-56		X	X				ON
M2-56	IAM	SUPERV	FL3 STORAGE E308										M2-57	X		X	X			ON
M2-57	PHOTO	SMOKE	FL3 CORR BY LOUNGE E306										M2-58		X	X				ON
M2-58	PHOTO	SMOKE	FL3 CORR BY LOUNGE E306										M2-59	X		X	X			ON
M2-59	ADRPUK	PULL	FL3 CORR BY STAIR #1 E307										M2-60		X	X	X			ON
M2-60	PHOTO	SMOKE	FL3 STORAGE E305										M2-61	X		X	X			ON
M2-61	PHOTO	SMOKE	FL3 ATRIUM E301 EAST										M2-62	X		X	X	X		ON
M2-62	PHOTO	SMOKE	FL3 RES CLOSET E302										M2-63	X		X	X	X		ON
M2-63	PHOTO	LSDUCT	FL3 RES CLOSET E302 DUCT E										M2-64	X		X	X	X		ON
M2-64	RIAM	RELAY	FL3 RES CLOSET E302 DUCT E RELAY										M2-65		X		X			ON
M2-65	PHOTO	LSDUCT	FL3 RES CLOSET E302 DUCT										M2-66	X		X				ON
M2-66	RIAM	RELAY	FL3 RES CLOSET E302 DUCT RELAY										M2-67	X		X				ON
M2-67	PHOTO	SMOKE	FL3 CORR BY E302 W										M2-68	X		X	X			ON
M2-68	PHOTO	SMOKE	FL3 ATRIUM E301 NORTH										M2-69		X		X			ON
M2-69	PHOTO	SMOKE	FL3 LOUNGE E306										M2-70	X		X				ON
M2-70	PHOTO	SMOKE	FL3 LOUNGE E306 DUCT S RELAY										M2-71	X		X				ON
M2-71	RIAM	RELAY	FL3 LOUNGE E306 DUCT S										M2-72		X		X			ON
M2-72	PHOTO	LSDUCT	FL3 LOUNGE E306 DUCT N										M2-73		X		X			ON
M2-73	RIAM	RELAY	FL3 LOUNGE E306 DUCT N RELAY										M2-74	X		X				ON
M2-74	RIAM	RELAY	FL3 ATRIUM E301 SMOKE CURTAIN										M2-75	X		X	X			ON
M2-75	PHOTO	SMOKE	FL3 ATRIUM E301 BY ELEV										M2-76	X		X	X			ON
M2-76	SPHOTO	SMOKE	FL3 UNIT D2 WILLOW E311 LOBBY										M2-77		X		X			ON
M2-77	PHOTO	SMOKE	FL3 UNIT D2 WILLOW E311 BEDROOM 2										M2-78	X		X	X			ON
M2-78	SPHOTO	SMOKE	FL3 UNIT D2 WILLOW E311 BEDRM 1										M2-79	X		X	X			ON
M2-79	PHOTO	SMOKE	FL3 TRASHREC E329										M2-80	X		X	X	X		ON
M2-80	PHOTO	LSDUCT	FL3 TRASHREC E329 DUCT S										M2-81		X		X			ON
M2-81	RIAM	RELAY	FL3 TRASHREC E329 DUCT S RELAY										M2-82	X		X				ON
M2-82	PHOTO	LSDUCT	FL3 TRASHREC E329 DUCT N										M2-83	X		X	X			ON
M2-83	RIAM	RELAY	FL3 TRASHREC E329 DUCT N RELAY										M2-84		X		X			ON
M2-84	PHOTO	LSDUCT	FL3 TRASHREC E329 DUCT E										M2-85	X		X				ON
M2-85	RIAM	RELAY	FL3 TRASHREC E329 DUCT E RELAY										M2-86	X		X	X			ON
M2-86	RIAM	RELAY	FL3 LOBBY E325 SMOKE CURTAIN										M2-87		X	X	X			ON
M2-87													M2-88	X		X	X			ON
M2-88													M2-89	X		X	X			ON
M2-89													M2-90	X		X	X			ON
M2-90													M2-91	X		X	X			ON
M2-91													M2-92	X		X	X	X		ON
M2-92													M2-93	X		X	X	X		ON
M2-93													M2-94	X		X	X	X		ON
M2-94													M2-95	X		X	X	X		ON
M2-95	4009A8	SIGNAL	FL4 ELEC E415 NAC										M2-96	X		X	X	X		ON
M2-96	PHOTO	SMOKE	FL4 ELEC E415										M2-97	X		X	X			ON
M2-97	PHOTO	SMOKE	FL4 HSKP E417										M2-98		X		X			ON
M2-98	PHOTO	LSDUCT	FL4 MEP E418 DUCT S										M2-99	X		X	X			ON
M2-99	RIAM	RELAY	FL4 MEP E418 DUCT S RELAY										M2-100	X		X	X			ON
M2-100	PHOTO	LSDUCT	FL4 MEP E418 DUCT N										M2-101	X		X	X			ON
M2-101	RIAM	RELAY	FL4 MEP E418 DUCT N RELAY										M2-102	X		X	X			ON
M2-102	PHOTO	SMOKE	FL4 MEP E418										M2-103	X		X	X			ON
M2-103	SPHOTO	SMOKE	FL4 UNIT C CEDAR E419 LOBBY										M2-104	X		X	X			ON
M2-104	PHOTO	SMOKE	FL4 UNIT C CEDAR E419 DEN										M2-105	X		X	X			ON
M2-105	SPHOTO	SMOKE	FL4 UNIT C CEDAR E419 BEDROOM										M2-106	X		X	X			ON
M2-106	PHOTO	SMOKE	FL4 UNIT C CEDAR E421 BEDROOM										M2-107	X		X	X			ON
M2-107	PHOTO	SMOKE	FL4 UNIT C CEDAR E421 DEN										M2-108	X		X	X			ON
M2-108	PHOTO	SMOKE	FL4 UNIT B BIRCH E423 LOBBY										M2-109	X		X	X			ON
M2-109	SPHOTO	SMOKE	FL4 UNIT B BIRCH E423 BEDROOM										M2-110	X		X	X	X		ON
M2-110	PHOTO	SMOKE	FL4 LOBBY E425 BY ELEV 2										M2-111	X		X	X	X		ON
M2-111	PHOTO	SMOKE	FL4 LOBBY E425 SMOKE CURTAIN										M2-112	X		X	X			ON
M2-112	RIAM	RELAY	FL4 ELEV #2 E130 SHAFT										M2-113	X		X	X			ON
M2-113	HEAT	HEAT	FL4 ELEV #2 E130 VENT DUCT										M2-114	X		X	X			ON
M2-114	PHOTO	LSDUCT	FL4 ELEV #2 E130 VENT RELAY										M2-115	X		X	X			ON
M2-115	TRIAM	UTILITY											M2-116	X		X	X			ON
M2-116													M2-117	X		X	X			ON
M2-117	PHOTO	SMOKE	FL4 UNASSIGNED E436										M2-118	X		X	X	X		ON
M2-118	PHOTO	LSDUCT	FL4 LOBBY E425 BY E436 DUCT										M2-119	X		X	X	X		ON
M2-119	RIAM	RELAY	FL4 LOBBY E425 BY E436 DUCT RELAY										M2-120	X		X	X	X		ON
M2-120	PHOTO	SMOKE	FL4 COMM E427										M2-121	X		X	X	X		ON
M2-121	PHOTO	LSDUCT	FL4 RES CLOSET E426 DUCT										M2-122	X		X	X	X		ON
M2-122	RIAM	RELAY	FL4 RES CLOSET E426 DUCT RELAY										M2-123	X		X	X	X		ON
M2-123	ADRPUK	PULL	FL4 CORR BY STAIR #2 E428										M2-124	X		X	X	X		ON
M2-124	IAM	WATER	FL4 STAIR #2 E428 WF										M2-125	X		X	X	X		ON
M2-125	IAM	SO	FL4 STAIR #2 E428 VS										M2-126	X		X	X	X		ON

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30" x 42" - Arch E1 Size

POINTS SHOWN IN ITALIC TEXT REFER TO EXISTING DEVICES.

POINTS SHOWN IN ITALIC TYPE REFER TO EXISTING DEVICES.													
ES POWER SUPPLY 1 - IDNAC CARD 1 - CIRCUIT A1					SWITCH SETTINGS								
IDNAC Address	Device Type	PID	Setting	Custom Label (Max 40 Characters)		1	2	3	4	5	6	7	8
A1-1	VO	490V-WRF	15cd	FL1 HSKO E117	1-4	X							ON
A1-2	SV	495V-APPLW	15cd	FL1 CORR BY E119	1-2	X							ON
A1-3	SV	495V-APPLW	15cd	FL1 CORR BY E121	1-3	X	X						ON
A1-4	SV	495V-APPLW	15cd	FL1 CORR BY E123	1-4	X		X					ON
A1-5	VO	490V-WRF	15cd	FL1 UNIT B - BIRCH (ADA) E123 RR	1-5	X	X						ON
A1-6	VO	490V-WRF	185cd	FL1 UNIT B - BIRCH (ADA) E123 BEDROOM	1-4	X	X						ON
A1-7	SV	495V-APPLW	75cd	FL1 UNIT B - BIRCH (ADA) E123 LOBBY	1-2	X	X						ON
A1-8	SV	495V-APPLW	15cd	FL1 LOBBY E125	1-8	X		X					ON
A1-9	VO	490V-WRF	15cd	FL1 TRASH/RECYCLE E131	1-9	X		X					ON
A1-10	SV	495V-APPLW	15cd	FL1 CORR BY E	1-10	X		X					ON
A1-11	VO	490V-WRF	30cd	FL1 RES. CLOSET E126	1-11	X	X	X					ON
A1-12	SV	495V-APPLW	15cd	FL1 CORR BY E115	1-12	X		X					ON
A1-13	SV	495V-APPLW	15cd	FL1 CORR BY E112	1-13	X		X					ON
A1-14	SV	495V-APPLW	15cd	FL1 CORR BY E107	1-14	X		X					ON
A1-15	VO	490V-WRF	15cd	FL1 RESTROOM E105	1-15	X	X	X	X				ON
A1-16	SV	495V-APPLW	75cd	FL1 ATRIUM E101 BY E105	1-16	X		X					ON
A1-17	SV	495V-APPLW	15cd	FL1 SOUTH EAST STAIR	1-17	X		X					ON
A1-18	VO	490V-WRF	30cd	FL1 RES. CLOSET E104 EAST	1-18	X		X					ON
A1-19	SV	495V-APPLW	75cd	FL1 ATRIUM E101 SOUTH	1-19	X	X	X					ON
A1-20	SV	495V-APPLW	15cd	FL1 CORR BY E103	1-20	X		X					ON
A1-21	VO	490V-WRF	15cd	FL1 MEP E118	1-21	X	X	X	X				ON

ES POWER SUPPLY 1 - IDNAC CARD 1 - CIRCUIT A2										SWITCH SETTINGS								
IDNAC Address	Device Type	PID	Setting	Custom Label (Max 40 Characters)						1	2	3	4	5	6	7	8	
A2-1	VO	49VO-WRF	15cd	FL2 HSKP E217						2-4	X							ON
A2-2	VO	49VO-WRF	15cd	FL2 HSKP E218						2-4	X							ON
A2-3	SV	49SV-APPLW	15cd	FL2 CORR BY E219						2-3	X							ON
A2-4	SV	49SV-APPLW	15cd	FL2 CORR BY E221						2-4	X							ON
A2-5	SV	49SV-APPLW	15cd	FL2 CORR BY E223						2-5	X							ON
A2-6	SV	49SV-APPLW	15cd	FL2 LOBBY E223						2-6	X							ON
A2-7										2-7	X	X	X	X	X	X	X	ON
A2-8	VO	49VO-WRF	15cd	FL2 TRANSFER/CLOSET E231						2-8	X							ON
A2-9	VO	49VO-WRF	15cd	FL2 RES. CLOSET E226						2-9	X							ON
A2-10	SV	49SV-APPLW	15cd	FL2 CORR BY E223						2-10	X							ON
A2-11	SV	49SV-APPLW	15cd	FL2 CORR BY E215						2-11	X							ON
A2-12	SV	49SV-APPLW	15cd	FL2 CORR BY E212						2-12	X	X						ON
A2-13	SV	49SV-APPLW	15cd	FL2 CORR BY E207						2-13	X	X	X					ON
A2-14	SV	49SV-APPLW	30cd	FL2 LOUNGE E206						2-14	X	X	X	X				ON
A2-15	SV	49SV-APPLW	30cd	FL2 BY E206 SOUTH WEST						2-15	X	X	X	X				ON
A2-16	VO	49VO-WRF	15cd	FL2 HSKP E205						2-16				X				ON
A2-17	49SV-APPLW	15cd		FL2 SOUTH EAST STAIR						2-17	X							ON
A2-18	SV	49SV-APPLW	30cd	FL2 BY RES CLOSET E202						2-18	X			X				ON
A2-19	VO	49VO-WRF	30cd	FL2 RES. CLOSET E202						2-19	X	X	X					ON
A2-20	SV	49SV-APPLW	15cd	FL2 CORR BY SOUTH WEST STAIR						2-20	X		X	X				ON

POINTS SHOWN IN ITALIC TYPE REFER TO EXISTING DEVICES.															
ES POWER SUPPLY 1 - IDNAC CARD 1 - CIRCUIT 43										SWITCH SETTINGS					
IDNAC Address	Device Type	PID	Setting	Custom Label (Max 40 Characters)				1	2	3	4	5	6	7	8
A3-2	VO	49V0-WRF	15cd	FL3 HSKP E317				3-1	X						ON
A3-3	SV	49SV-APPLW	15cd	FL3 MEP E318				3-2	X						ON
A3-4	VO	49V0-WRF	15cd	FL3 CORR BY E319				3-3	X						ON
A3-5	SV	49SV-APPLW	15cd	FL3 UNIT C-CEDAR (ADAR) E318 RR				3-4	X		X				ON
A3-6	VO	49V0-WRF	185cd	FL3 UNIT C-CEDAR (ADAR) E318 BEDROOM				3-5	X		X				ON
A3-7	SV	49SV-APPLW	15cd	FL3 UNIT C-CEDAR (ADAR) E318 LOBBY				3-6	X		X				ON
A3-8	VO	49V0-WRF	15cd	FL3 CORR BY E321				3-7	X	X	X				ON
A3-9	SV	49SV-APPLW	15cd	FL3 CORR BY E322				3-8	X		X				ON
A3-9	SV	49SV-APPLW	15cd	FL3 LOBBY E323				3-9	X		X				ON
A3-10	VO	49V0-WRF	15cd	FL3 UNASSIGNED E326				3-10	X		X				ON
A3-11	VO	49V0-WRF	15cd	FL3 REA. CLOSET E330				3-11	X		X				ON
A3-12	VO	49V0-WRF	15cd	FL3 CORR BY E332				3-12	X		X				ON
A3-13	SV	49SV-APPLW	15cd	FL3 CORR BY E336				3-13	X		X	X			ON
A3-14	SV	49SV-APPLW	15cd	FL3 CORR BY E311				3-14	X	X	X	X			ON
A3-15	SV	49SV-APPLW	15cd	FL3 CORR BY E312				3-15	X	X	X	X			ON
A3-16	VO	49V0-WRF	15cd	FL3 STORAGE E308				3-16	X			X			ON
A3-17	SV	49SV-APPLW	15cd	FL3 CORR BY E306				3-17	X		X	X			ON
A3-18	SV	49SV-APPLW	30cd	FL3 LOUNGE E306				3-18	X		X	X			ON
A3-19	VO	49V0-WRF	30cd	FL3 ATRIUM E301 WEST				3-19	X		X	X			ON
A3-20	VO	49V0-WRF	15cd	FL3 STORAGE E305				3-20	X		X	X			ON
A3-21	SV	49SV-APPLW	15cd	FL3 SOUTH EAST STAIR				3-21	X		X	X			ON
A3-22	SV	49SV-APPLW	30cd	FL3 ATRIUM E301 EAST				3-22	X		X	X			ON
A3-23	VO	49V0-WRF	30cd	FL3 REAR. CLOSET E302				3-23	X		X	X			ON
A3-24	SV	49SV-APPLW	15cd	FL3 CORR BY E302				3-24	X		X	X			ON

POINTS SHOWN IN ITALIC TEXT REFER TO EXISTING DEVICES.													
ES POWER SUPPLY 2 - IDNAC CARD 2 - CIRCUIT A4						SWITCH SETTINGS							
IDNAC Address	Device Type	PID	Setting	Custom Label (Max 40 Characters)		1	2	3	4	5	6	7	8
A4-1	VO	49V0-WRF	15cd	FL4 HSKP E417		4-1	X						ON
A4-2	VO	49V0-WRF	15cd	FL4 MEP E418		4-2	X						ON
A4-3	SV	49SV-APPLW	15cd	FL4 CORR BY E419		4-3	X	X					ON
A4-4	SV	49SV-APPLW	15cd	FL4 CORR BY E421		4-4	X		X				ON
A4-5	SV	49SV-APPLW	15cd	FL4 CORR BY E423		4-5	X						ON
A4-6	SV	49SV-APPLW	15cd	FL4 ORBT E424		4-6	X	X	X				ON
A4-7	SV	49SV-APPLW	15cd	FL4 UNASSIGNED E426		4-7	X						ON
A4-9	VO	49V0-WRF	15cd	FL4 RES. CLOSET E426		4-9	X	X					ON
A4-10	SV	49SV-APPLW	15cd	FL4 CORR BY E433		4-10	X	X					ON
A4-11	SV	49SV-APPLW	15cd	FL4 CORR BY E411		4-11	X	X	X				ON
A4-12	SV	49SV-APPLW	15cd	FL4 CORR BY E412		4-12	X	X					ON
A4-13	VO	49V0-WRF	15cd	FL4 STORAGE E408		4-13	X	X	X				ON
A4-14	SV	49SV-APPLW	15cd	FL4 CORR BY STAIR E407		4-14	X	X	X				ON
A4-15	VO	49V0-WRF	15cd	FL4 RESTROOM E405		4-15	X	X	X	X			ON
A4-16	SV	49SV-APPLW	30cd	FL4 ATRIUM E401 EAST		4-16					X		ON
A4-17	VO	49V0-WRF	30cd	FL4 RES. CLOSET E402		4-17	X				X		ON
A4-18	SV	49SV-APPLW	30cd	FL4 LOUNGE E406		4-18	X				X		ON
A4-19	AV	48AV-WRF	30cd	FL4 ATRIUM E401 WEST		4-19	X	X	X				ON

	Amplifier Wattage	Watts Used	Alarm	Expansion Card?	Avail. Ckts.	Used Ckts.	% Used
Amp-1	100	14.25W	3.800A	No	6	6	14.25%

*Circuit Voltage = 70vrms [Et]

SPEAKER CIRCUIT DESCRIPTION	Amp #	Plan Circuit Number	Speaker Tap 25 Watt	Speaker Tap .5 Watt	Total Spks per Circuit	Total Watts [P]	Wire Gauge	Est. Ckt. Length [D] in Feet	Wire Res. Per Foot [Rw]	Circuit Resistance [Ri=20*Rw]	Speaker Current [I=P/E]	Speaker Resistance [Ri=Est]	Voltage At End [Ea=E[1]-I*Ri]	Watts At End [Pa=Ea*Is]	Actual dB Loss [dB=Log10 (P[1]/Pa)]	Max Allowable Ckt. Length [ML=0.1414*Ri] [2'W]
FL1 SPEAKER CIRCUIT	Amp-1	S1	11	2	13	3.75 Watts	18ga	700	0.0078	10.878	0.054	1306.687	69.422	3.688	-.07 db	3481 Ft.
FL2 SPEAKER CIRCUIT	Amp-1	S2	13	0	13	3.25 Watts	18ga	700	0.0078	10.878	0.056	1567.692	69.499	3.204	-.06 db	4016 Ft.
FL3 SPEAKER CIRCUIT	Amp-1	S3	12	2	14	4. Watts	18ga	700	0.0078	10.878	0.057	1225.000	69.384	3.330	-.08 db	3263 Ft.
FL4 SPEAKER CIRCUIT	Amp-1	S4	9	2	11	3.25 Watts	18ga	700	0.0078	10.878	0.056	1567.692	69.499	3.204	-.06 db	4016 Ft.

A1			Notification SLC Distributed Load Voltage Drop								
Starting Voltage:		29vac									
Min. Device Voltage:		23-vdc		Primary Wire Gauge:		14ga		Wire Res. Per Ft.		@ 75° Celsius	
Allowable % Drop:		26.7%		Home Run Wire Gauge:		14ga		Wire Res. Per Ft.		@ 75° Celsius	
Class B Calculations											% Vdrop Wire Length
Branch	Device #	From	Distance (Feet)	PID	Setting	Device Draw	Current at Device	Voltage Drop	Voltage at Device		
1	A1-1	PANEL	13	48V0-WRF	15cd	0.0470	1.239	0.099	28.901	Branch 1: 2.48% Length: 707'	
1	A1-2	A1-1	24	48S5-APPL-W	15cd	0.0470	0.553	0.045	28.820		
1	A1-3	A1-1	54	48S5-APPL-W	15cd	0.0470	0.508	0.168	28.851		
1	A1-4	A1-3	54	48S5-APPL-W	15cd	0.0470	0.459	0.152	28.500		
1	A1-5	A1-4	24	49V0-WRF	15cd	0.0470	0.355	0.052	28.447		
1	A1-6	A1-5	29	49V0-WRF	185cd	0.2680	0.308	0.055	28.393		
1	A1-7	A1-6	13	48S5-APPL-W	75cd	0.100	0.000	0.000	28.385		
1	A1-8	A1-11	60	48S5-APPL-W	15cd	0.0470	0.141	0.052	28.432		
1	A1-9	A1-8	21	49V0-WRF	15cd	0.0470	0.047	0.006	28.426		
1	A1-10	A1-8	62	48S5-APPL-W	15cd	0.0470	0.047	0.018	28.414		
1	A1-11	A1-4	24	49V0-WRF	30cd	0.0570	0.057	0.015	28.484		
1	A1-12	A1-1	26	48S5-APPL-W	15cd	0.0470	0.592	0.095	28.807		
1	A1-13	A1-12	53	48S5-APPL-W	15cd	0.0470	0.545	0.177	28.629		
1	A1-14	A1-13	32	48S5-APPL-W	75cd	0.1000	0.498	0.098	28.531		
1	A1-15	A1-14	30	49V0-WRF	15cd	0.0470	0.388	0.073	28.458		
1	A1-16	A1-15	21	48S5-APPL-W	15cd	0.0000	0.351	0.045	28.413		
1	A1-17	A1-16	40	48S5-APPL-W	15cd	0.0470	0.251	0.062	28.351		
1	A1-18	A1-17	31	49V0-WRF	30cd	0.0570	0.204	0.039	28.312		
1	A1-19	A1-18	27	48S5-APPL-W	75cd	0.1000	0.147	0.024	28.288		
1	A1-20	A1-19	29	48S5-APPL-W	15cd	0.0470	0.047	0.008	28.290		
1	A1-21	A1-1	20	49V0-WRF	15cd	0.0470	0.047	0.006	28.895		

A2			Distributed Load Voltage Drop											
Starting Voltage: 24vdc						Primary Wire Gauge: 14ga			Wire Res. Per Ft. 0.00370 @ 75° Celsius					
Min. Device Voltage: 23 vdc						Home Run Wire Gauge: 14ga			Wire Res. Per Ft. 0.00370 @ 75° Celsius					
Allowable % Drop: 20.7%														
Class B Calculations													% Vdrop Wire Length	
Branch	Device #	From	Distance (Feet)	PID	Setting	Device Draw	Current at Device	Voltage Drop	Voltage at Device					
1	A2-1	PANEL	36	49V0-WRF	15cd	0.0470	0.933	0.206	28.794	Branch 1: 2.48% Length: 662				
1	A2-2	A2-1	22	49V0-WRF	15cd	0.0470	0.047	0.006	28.787					
1	A2-3	A2-1	24	48SV-APPL	15cd	0.0470	0.329	0.048	28.745					
1	A2-4	A2-3	54	48SV-APPL	15cd	0.0470	0.282	0.093	28.652					
1	A2-5	A2-4	54	48SV-APPL	15cd	0.0470	0.235	0.078	28.574					
1	A2-6	A2-5	30	48SV-APPL	15cd	0.0470	0.148	0.034	28.540					
1	A2-7	A2-6	17	49V0-WRF	15cd	0.0470	0.047	0.009	28.531					
1	A2-8	A2-6	30	49V0-WRF	15cd	0.0470	0.047	0.009	28.520					
1	A2-10	A2-9	52	48SV-APPL	15cd	0.0470	0.047	0.015	28.495					
1	A2-11	A2-1	26	48SV-APPL	15cd	0.0470	0.510	0.081	28.712					
1	A2-12	A2-11	53	48SV-APPL	15cd	0.0470	0.463	0.151	28.560					
1	A2-13	A2-12	32	48SV-APPL	15cd	0.0470	0.416	0.082	28.480					
1	A2-14	A2-13	28	48SV-APPL	30cd	0.0570	0.369	0.063	28.417					
1	A2-15	A2-14	38	48SV-APPL	30cd	0.0570	0.057	0.013	28.404					
1	A2-16	A2-15	26	49V0-WRF	15cd	0.0470	0.255	0.041	28.376					
1	A2-17	A2-16	40	48SV-APPL	15cd	0.0470	0.208	0.051	28.325					
1	A2-18	A2-17	25	48SV-APPL	30cd	0.0570	0.161	0.025	28.300					
1	A2-19	A2-18	19	49V0-WRF	30cd	0.0570	0.104	0.012	28.288					
1	A2-20	A2-19	38	48SV-APPL	15cd	0.0470	0.047	0.011	28.277					
						0.0000	0.000	0.000	0.000					

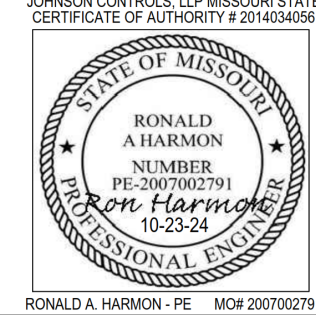
A3		Distributed Load Voltage Drop									
Starting Voltage: 294dc		294dc		Primary Wire Gauge: 14ga		Wire Res. Per Ft. 0.00370		@ 75° Celsius			
Min. Device Voltage: 23.4dc		23.4dc		Home Run Wire Gauge: 14ga		Wire Res. Per Ft. 0.00370		@ 75° Celsius			
Allowable % Drop: 20.7%											
Class B Calculations											
Branch	Device #	From	Distance (feet)	PID	Setting	Device Draw	Current at Device	Voltage Drop	Voltage at Device	% Vdrop	Wire Length
1	A3-1	PANEL	54	490V-WRF	15cd	0.0470	1.252	0.428	25.572	Branch 1: 3.62% Length: 779	
1	A3-2	A3-1	22	490V-WRF	15cd	0.0470	0.047	0.066	26.565		
1	A3-3	A3-1	24	495V-APPL	15cd	0.0470	0.631	0.093	26.479		
1	A3-4	A3-3	39	490V-WRF	15cd	0.0470	0.584	0.140	26.339		
1	A3-5	A3-3	25	490V-WRF	15cd	0.2080	0.253	0.039	26.300		
1	A3-6	A3-5	32	495V-APPL	15cd	0.0470	0.047	0.099	26.290		
1	A3-7	A3-4	41	495V-APPL	15cd	0.0470	0.282	0.071	26.268		
1	A3-8	A3-7	54	495V-APPL	15cd	0.0470	0.235	0.078	26.190		
1	A3-9	A3-8	31	495V-APPL	15cd	0.0470	0.408	0.038	26.154		
1	A3-10	A3-9	31	490V-WRF	15cd	0.0470	0.407	0.000	26.166		
1	A3-11	A3-9	30	490V-WRF	15cd	0.0470	0.084	0.029	26.125		
1	A3-13	A3-12	52	495V-APPL	15cd	0.0470	0.047	0.051	26.110		
1	A3-14	A3-1	26	495V-APPL	15cd	0.0470	0.567	0.019	25.481		
1	A3-15	A3-15	22	495V-APPL	15cd	0.0470	0.520	0.169	25.312		
1	A3-16	A3-15	22	490V-WRF	15cd	0.0470	0.473	0.064	25.246		
1	A3-17	A3-16	25	495V-APPL	15cd	0.0470	0.426	0.065	25.183		
1	A3-18	A3-17	39	495V-APPL	30cd	0.0570	0.379	0.091	25.092		
1	A3-19	A3-18	24	494V-WRF	30cd	0.0670	0.067	0.010	25.062		
1	A3-20	A3-18	34	495V-WRF	15cd	0.0470	0.255	0.053	25.035		
1	A3-21	A3-20	27	495V-APPL	15cd	0.0470	0.208	0.034	25.004		
1	A3-22	A3-21	32	495V-APPL	30cd	0.0570	0.161	0.032	24.973		
1	A3-23	A3-22	20	490V-WRF	30cd	0.0570	0.104	0.013	24.960		
1	A3-24	A3-23	36	495V-APPL	15cd	0.0470	0.047	0.010	24.940		
						0.0000	0.000	0.000	0.000		

A4		Notification SLC Distributed Load Voltage Drop									
Starting Voltage: 294vdc		29vdc		Primary Wire Gauge: 14ga		Wire Res. Per Ft. 0.00370		@ 75° Celsius			
Min. Device Voltage: 23vdc		23vdc		Home Run Wire Gauge: 14ga		Wire Res. Per Ft. 0.00370		@ 75° Celsius			
Allowable % Drop: 20.7%											
Class B Calculations											
Branch	Device #	From	Distance (Feet)	PID	Setting	Device	Current at Device	Voltage Drop	Voltage at Device	% Vdrop	Wire Length
1	A4-1	PANEL	74	48V0-WRF	15cd	0.0470	0.086	0.407	28.593	Branch 1: 2.83% Length: 680	
1	A4-2	A4-1	22	48V0-WRF	15cd	0.0470	0.047	0.006	28.587		
1	A4-3	A4-1	24	48V5-APPLW	15cd	0.0470	0.329	0.048	28.544		
1	A4-4	A4-3	54	48V5-APPLW	15cd	0.0470	0.282	0.093	28.451		
1	A4-5	A4-4	54	48V5-APPLW	15cd	0.0470	0.235	0.078	28.373		
1	A4-6	A4-5	30	48V5-APPLW	15cd	0.0470	0.158	0.035	28.338		
1	A4-7	A4-6	18	48V0-WRF	15cd	0.0470	0.047	0.005	28.334		
1	A4-8	A4-6	90	48V0-WRF	15cd	0.0470	0.094	0.029	28.310		
1	A4-10	A4-8	52	48V5-APPLW	15cd	0.0470	0.047	0.015	28.295		
1	A4-11	A4-10	26	48V5-APPLW	15cd	0.0470	0.047	0.015	28.277		
1	A4-12	A4-11	53	48V5-APPLW	15cd	0.0470	0.046	0.019	28.279		
1	A4-13	A4-12	22	48V0-WRF	15cd	0.0470	0.379	0.051	28.228		
1	A4-14	A4-13	25	48V5-APPLW	15cd	0.0470	0.332	0.051	28.277		
1	A4-15	A4-15	32	48V0-WRF	15cd	0.0470	0.285	0.056	28.221		
1	A4-16	A4-15	49	48V5-APPLW	30cd	0.0570	0.114	0.034	28.186		
1	A4-17	A4-16	19	48V0-WRF	30cd	0.0570	0.057	0.007	28.180		
1	A4-18	A4-15	33	48V5-APPLW	30cd	0.0570	0.124	0.025	28.195		
1	A4-19	A4-18	25	48V0-WRF	30cd	0.0570	0.067	0.010	28.185		
						0.0000	0.000	0.000			



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JOHN KNOX VILLAGE
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LEE'S SUMMIT, MO 64081

[illegible]

DRAWN BY:	MARIANO MENDEZ
CHECKED BY:	TIM EUBANKS
ISSUE DATE:	6/10/24
JOB #:	
PROJECT #:	332-650560594
JOHNSON CONTROLS © 2024	
SYSTEM:	FIRE ALARM SYSTEM
SHEET:	

CALCULATIONS AND SCHEDULES

FA-602

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30" x 42" - Arch 11 Size

FL1 ELECTRICAL ROOM E115 4009 NAC						
Module	Qty	Description	Standby Current	Total Standby	Alarm Current	Total Alarm
Panel Equipment						
4009-9201	1	4009 IDNET NAC EXTENDER, 120 VAC	0.0850	0.0850	0.1850	0.1850
4009-9807	1	NAC CARD, 4PT, IDNET	0.0400	0.0400	0.0400	0.0400
Panel Totals				0.1250		0.2250
Notification Appliances						
4098-9772	30	TRUEALARM 520HZ SOUNDER BASE W/ REMOTE LED *	520 Hz	0.0000	0.0000	0.1290
Peripheral Totals				0.0000		3.8700
System Totals*: Standby				0.1250	Alarm	4.0950

Battery Set #1 (Cabinet/Charger #1)						
Select ALL Power Supplies on this battery set:						
4009				0.1250		4.0950
Sub Total				0.1250		4.0950
Additional Current Draws:						
RUI Connected Peripheral Devices	0	x 0.0035	= 0.0000	x 0.0035	= 0.0000	
MAPNET/IDNet Device Address Communication Current	0	x 0.0000000	= 0.0000	x 0.0000000	= 0.0000	
Sub Total				0.1250		4.0950
Spare addressable point capacity 0% 0 x 0 = 0.0000 x 0 = 0.0000						
Total				0.1250		4.0950
Standby Time = 24 Hrs x 0.1250 = 3.0000 Standby Ah						
Alarm Time = 15 Min 0.25 x 4.095 = 1.0238 Alarm Ah						
Additional Spare Battery Capacity = 0% + 4.0238						
Battery Discharge Factor = 20% + 0.8048						
Minimum Battery Required 2081-9272 6.2AH (2x) 4.8285						
Battery Supplied 2081-9272 6.2AH (2x)						

* System Totals represent total system current requirements. Those currents may be distributed between multiple battery sets or power supplies as shown above.

4009 NAC PANEL 1 AT ELECTRICAL ROOM E115

SCALE:N.T.S.

FL3 ELECTRICAL ROOM E315 4009 NAC						
Module	Qty	Description	Standby Current	Total Standby	Alarm Current	Total Alarm
Panel Equipment						
4009-9201	1	4009 IDNET NAC EXTENDER, 120 VAC	0.0850	0.0850	0.1850	0.1850
4009-9807	1	NAC CARD, 4PT, IDNET	0.0400	0.0400	0.0400	0.0400
Panel Totals				0.1250		0.2250
Notification Appliances						
4098-9772	30	TRUEALARM 520HZ SOUNDER BASE W/ REMOTE LED *	520 Hz	0.0000	0.0000	0.1290
Peripheral Totals				0.0000		3.8700
System Totals*: Standby				0.1250	Alarm	4.0950

Battery Set #1 (Cabinet/Charger #1)						
Select ALL Power Supplies on this battery set:						
4009				0.1250		4.0950
Sub Total				0.1250		4.0950
Additional Current Draws:						
RUI Connected Peripheral Devices	0	x 0.0035	= 0.0000	x 0.0035	= 0.0000	
MAPNET/IDNet Device Address Communication Current	0	x 0.0000000	= 0.0000	x 0.0000000	= 0.0000	
Sub Total				0.1250		4.0950
Spare addressable point capacity 0% 0 x 0 = 0.0000 x 0 = 0.0000						
Total				0.1250		4.0950
Standby Time = 24 Hrs x 0.1250 = 3.0000 Standby Ah						
Alarm Time = 15 Min 0.25 x 4.095 = 1.0238 Alarm Ah						
Additional Spare Battery Capacity = 0% + 4.0238						
Battery Discharge Factor = 20% + 0.8048						
Minimum Battery Required 2081-9272 6.2AH (2x) 4.8285						
Battery Supplied 2081-9272 6.2AH (2x)						

* System Totals represent total system current requirements. Those currents may be distributed between multiple battery sets or power supplies as shown above.

VOLTAGE DROP SUMMARY				
Plan Circuit	Description	Load	% Drop	
N1-H1	FL1 NORTH EAST SUITES	SI01 1.032A	4.63%	
N1-H2	FL1 NORTH WEST SUITES	SI02 1.419A	8.74%	
N1-H3	FL1 SOUTH SUITES	SI03 1.419A	8.29%	
		3.870A	Total	

POINTS SHOWN IN ITALIC TEXT REFER TO EXISTING DEVICES.

N1-H1 Distributed Load Voltage Drop						
Allowable % Drop: 17.9% Wire Res. Per Ft. 0.003070 @ 75° Celsius						
Wire Gauge: 14ga Min. Device Voltage: 16.vdc						
Starting Voltage: 19.5vdc % Voltage Drop 4.63%						
Ckt Capacity 2.A						
Normal Operation						
Device #	PID	Setting	Distance (Feet)	Device Current	Voltage Drop	Voltage At Device
N1-H1-1	4098-9772	520 Hz	41	0.129	0.260	19.24
N1-H1-2	4098-9772	520 Hz	17	0.129	0.354	19.15
N1-H1-3	4098-9772	520 Hz	43	0.129	0.558	18.94
N1-H1-4	4098-9772	520 Hz	23	0.129	0.649	18.85
N1-H1-5	4098-9772	520 Hz	16	0.129	0.700	18.80
N1-H1-6	4098-9772	520 Hz	64	0.129	0.852	18.65
N1-H1-7	4098-9772	520 Hz	24	0.129	0.890	18.61
N1-H1-8	4098-9772	520 Hz	16	0.129	0.903	18.60
Totals:			244 Ft.	1.032A		

N1-H2 Distributed Load Voltage Drop						
Allowable % Drop: 17.9% Wire Res. Per Ft. 0.003070 @ 75° Celsius						
Wire Gauge: 14ga Min. Device Voltage: 16.vdc						
Starting Voltage: 19.5vdc % Voltage Drop 8.74%						
Ckt Capacity 2.A						
Normal Operation						
Device #	PID	Setting	Distance (Feet)	Device Current	Voltage Drop	Voltage At Device
N1-H2-1	4098-9772	520 Hz	50	0.129	0.436	19.06
N1-H2-2	4098-9772	520 Hz	21	0.129	0.602	18.90
N1-H2-3	4098-9772	520 Hz	33	0.129	0.837	18.66
N1-H2-4	4098-9772	520 Hz	21	0.129	0.970	18.53
N1-H2-5	4098-9772	520 Hz	38	0.129	1.181	18.32
N1-H2-6	4098-9772	520 Hz	14	0.129	1.247	18.25
N1-H2-7	4098-9772	520 Hz	59	0.129	1.481	18.02
N1-H2-8	4098-9772	520 Hz	23	0.129	1.554	17.95
N1-H2-9	4098-9772	520 Hz	42	0.129	1.654	17.85
N1-H2-10	4098-9772	520 Hz	24	0.129	1.692	17.81
N1-H2-11	4098-9772	520 Hz	16	0.129	1.705	17.80
Totals:			341 Ft.	1.419A		

N1-H3 Distributed Load Voltage Drop						
Allowable % Drop: 17.9% Wire Res. Per Ft. 0.003070 @ 75° Celsius						
Wire Gauge: 14ga Min. Device Voltage: 16.vdc						
Starting Voltage: 19.5vdc % Voltage Drop 8.29%						
Ckt Capacity 2.A						
Normal Operation						
Device #	PID	Setting	Distance (Feet)	Device Current	Voltage Drop	Voltage At Device
N1-H3-1	4098-9772	520 Hz	46	0.129	0.401	19.10
N1-H3-2	4098-9772	520 Hz	21	0.129	0.567	18.93
N1-H3-3	4098-9772	520 Hz	33	0.129	0.802	18.70
N1-H3-4	4098-9772	520 Hz	21	0.129	0.935	18.56
N1-H3-5	4098-9772	520 Hz	34	0.129	1.124	18.38
N1-H3-6	4098-9772	520 Hz	14	0.129	1.190	18.31
N1-H3-7	4098-9772	520 Hz	54	0.129	1.404	18.10
N1-H3-8	4098-9772	520 Hz	25	0.129	1.484	18.02
N1-H3-9	4098-9772	520 Hz	35	0.129	1.567	17.93
N1-H3-10	4098-9772	520 Hz	23	0.129	1.603	17.90
N1-H3-11	4098-9772	520 Hz	16	0.129	1.616	17.88
Totals:			322 Ft.	1.419A		

VOLTAGE DROP SUMMARY				
Plan Circuit	Description	Load	% Drop	
N3-H1	FL1 NORTH EAST SUITES	SI01 1.032A	4.63%	
N3-H2	FL1 NORTH WEST SUITES	SI02 1.419A	8.74%	
N3-H3	FL1 SOUTH SUITES	SI03 1.419A	8.29%	
		3.870A	Total	

POINTS SHOWN IN ITALIC TEXT REFER TO EXISTING DEVICES.

N3-H1 Distributed Load Voltage Drop						
Allowable % Drop: 17.9% Wire Res. Per Ft. 0.003070 @ 75° Celsius						
Wire Gauge: 14ga Min. Device Voltage: 16.vdc						
Starting Voltage: 19.5vdc % Voltage Drop 4.63%						
Circuit Capacity 2.A						
Normal Operation						
Device #	PID	Setting	Distance (Feet)	Device Current	Voltage Drop	Voltage At Device
N3-H1-1	4098-9772	520 Hz	41	0.129	0.260	19.24
N3-H1-2	4098-9772	520 Hz	17	0.129	0.354	19.15
N3-H1-3	4098-9772	520 Hz	43	0.129	0.558	18.94
N3-H1-4	4098-9772	520 Hz	23	0.129	0.649	18.85
N3-H1-5	4098-9772	520 Hz	16	0.129	0.700	18.80
N3-H1-6	4098-9772	520 Hz	64	0.129	0.852	18.65
N3-H1-7	4098-9772	520 Hz	24	0.129	0.890	18.61
N3-H1-8	4098-9772	520 Hz	16	0.129	0.903	18.60
Totals:			244 Ft.	1.032A		

N3-H2 Distributed Load Voltage Drop						
Allowable % Drop: 17.9% Wire Res. Per Ft. 0.003070 @ 75° Celsius						
Wire Gauge: 14ga Min. Device Voltage: 16.vdc						
Starting Voltage: 19.5vdc % Voltage Drop 8.74%						
Ckt Capacity 2.A						
Normal Operation						
Device #	PID	Setting	Distance (Feet)	Device Current	Voltage Drop	Voltage At Device
N3-H2-1	4098-9772	520 Hz	50	0.129	0.436	19.06
N3-H2-2	4098-9772	520 Hz	21	0.129	0.602	18.90
N3-H2-3	4098-9772	520 Hz	33	0.129	0.837	18.66
N3-H2-4	4098-9772	520 Hz	21	0.129	0.970	18.53
N3-H2-5	4098-9772	520 Hz	38	0.129	1.181	18.32
N3-H2-6	4098-9772	520 Hz	14	0.129	1.247	18.25
N3-H2-7	4098-9772	520 Hz	59	0.129	1.481	18.02
N3-H2-8	4098-9772	520 Hz	23	0.129	1.554	17.95
N3-H2-9	4098-9772	520 Hz	42	0.129	1.654	17.85
N3-H2-10	4098-9772	520 Hz	24	0.129	1.692	17.81
N3-H2-11	4098-9772	520 Hz	16	0.129	1.705	17.80
Totals:			341 Ft.	1.419A		

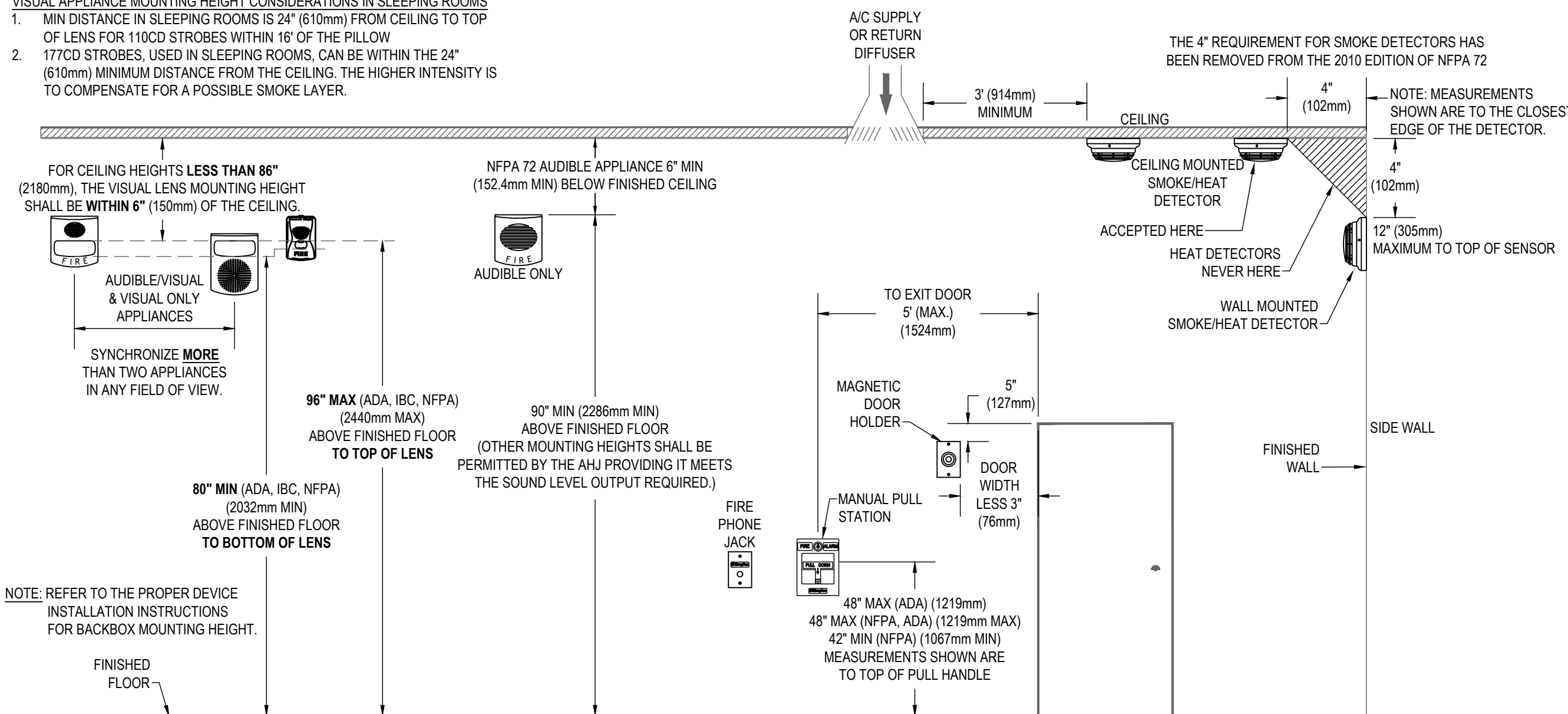
N3:H3 Distributed Load Voltage Drop							
Allowable % Drop: 17.9%			Wire Res. Per Ft. 0.003070		@ 75° Celsius		
Wire Gauge: 14ga			Min. Voltage Drop: 16.4%				
Starting Voltage: 19.2vdc			% Voltage Drop: 8.29%				
Ckt Capacity: 2.5A							
Normal Operation							
Device #	PID	Setting	Distance (Feet)	Device Current	Voltage Drop	Voltage At Device	
N3:H3-1	4098-9772	520 Hz	46	0.129	0.401	19.10	
N3:H3-2	4098-9772	520 Hz	21	0.129	0.567	18.93	
N3:H3-7	4098-9772	520 Hz	33	0.129	0.892	18.70	
N3:H3-4	4098-9772	520 Hz	21	0.129	0.935	18.56	
N3:H3-5	4098-9772	520 Hz	34	0.129	1.124	18.38	
N3:H3-6	4098-9772	520 Hz	14	0.129	1.190	18.31	
N3:H3-7	4098-9772	520 Hz	54	0.129	1.464	18.10	
N3:H3-8	4098-9772	520 Hz	25	0.129	1.484	18.02	
N3:H3-9	4098-9772	520 Hz	35	0.129	1.567	17.83	
N3:H3-10	4098-9772	520 Hz	23	0.129	1.603	17.80	
N3:H3-11	4098-9772	520 Hz	16	0.129	1.616	17.88	
Totals:				322 Ft.	1.419A		

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LAST PRINTED: 10/22/2024 10:52:19 AM
30" x 42" Arch E Size

DEVICE MOUNTING HEIGHT REFERENCE

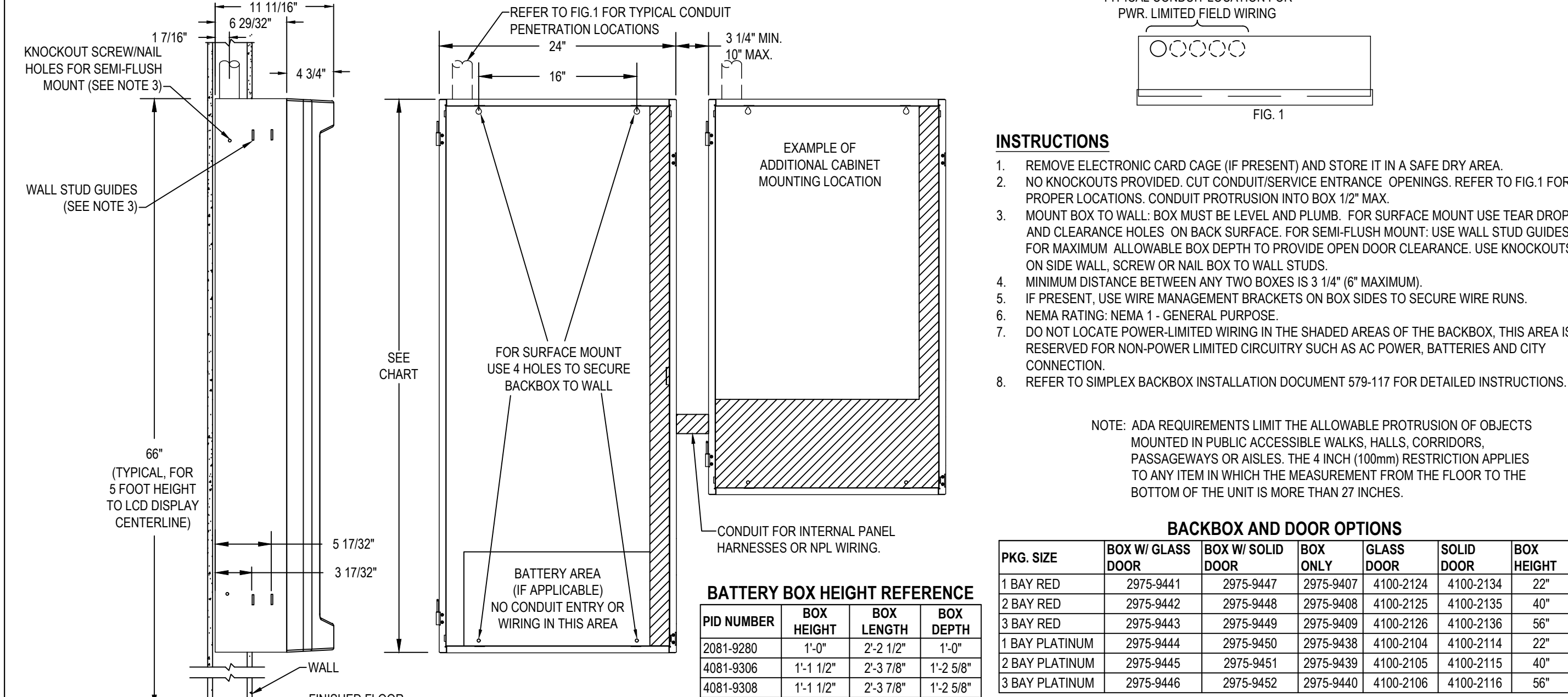
PER NFPA 72

- VISUAL APPLIANCE MOUNTING HEIGHT CONSIDERATIONS IN SLEEPING ROOMS**
- MIN DISTANCE IN SLEEPING ROOMS IS 24" (610mm) FROM CEILING TO TOP OF LENS FOR 110CD STROBES WITHIN 16' OF THE PILLOW
 - 177CD STROBES, USED IN SLEEPING ROOMS, CAN BE WITHIN THE 24" (610mm) MINIMUM DISTANCE FROM THE CEILING. THE HIGHER INTENSITY IS TO COMPENSATE FOR A POSSIBLE SMOKE LAYER.



FIRE ALARM CONTROL PANEL BACKBOX INSTALLATION

SIMPLEX 4100es SERIES

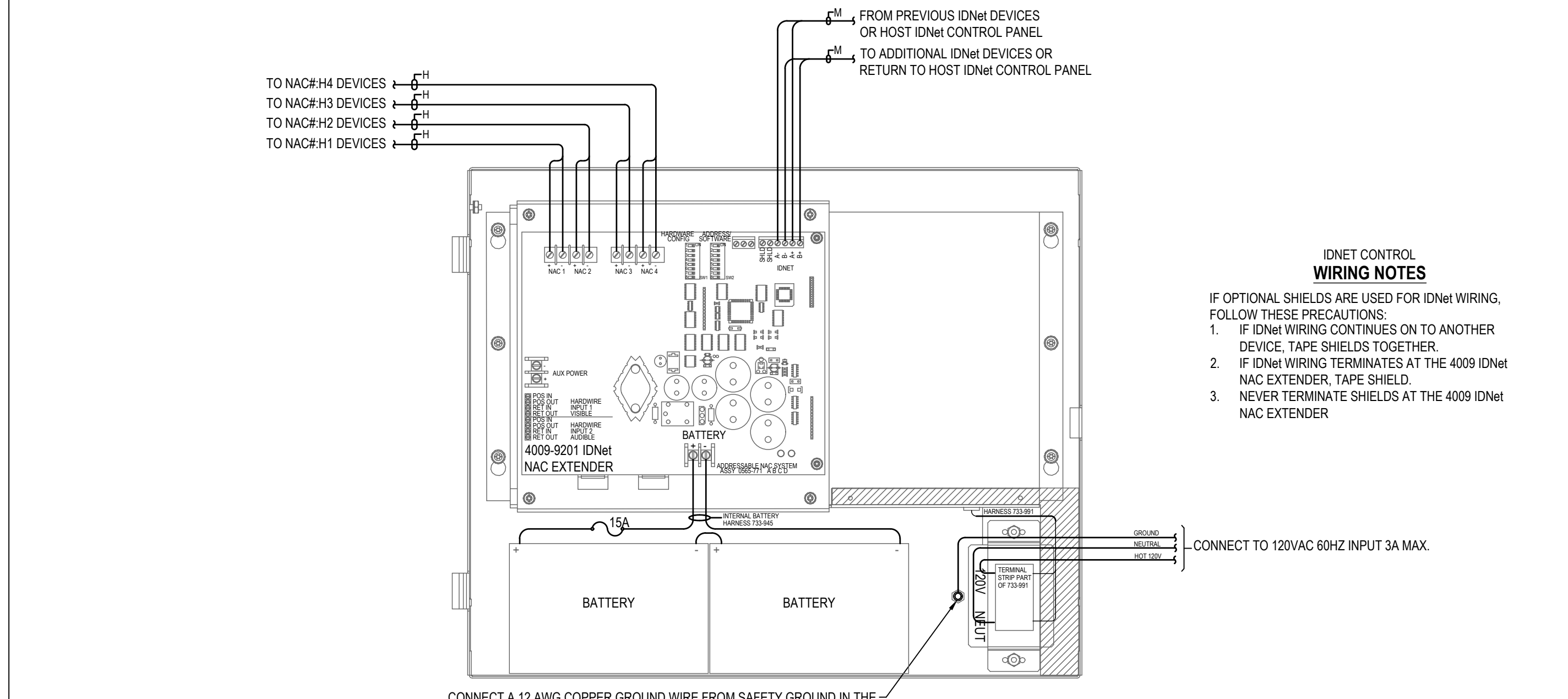


END OF LINE RESISTOR CODES

						NOTE: REFER TO PANEL/MODULE AND DEVICE INSTALLATION INSTRUCTIONS FOR PROPER TERMINATIONS.				
MODEL	REF. NUMBER	Ω	BAND NUMBER			WATTS	CIRCUIT TYPE	FIRE ALARM PANEL/MODULE		
4081-9001	733-892	2.2K	RED	RED	RED	GLD	N/A	1	ANNUNCIATOR (4300)	4004, 4010 (TROUBLE)
4081-9002	733-893	3.3K	ORG	ORG	RED	GLD	N/A	1	N.O. INITIATING PULL, SMOKE, HEAT, WATERFLOW, TAMPER, ETC.	4004*, 4008*, 4005*, 4008, 4100*, 4102, 4100U, 24M
4081-9003	733-896	4.7K	YEL	YEL	RED	GLD	N/A	1/2	24 PT. I/O SWITCH SUPV. CURRENT LIMITED N.O. INIT., NOTIFICATION (DACI)	4004, 4005, 4090-9001 IDNET IAM, 2190-9174 MAPNET II 2 PT. I/O 4-20MA 24V (TROUBLE)
4081-9004	733-886	6.8K	BLU	GRY	RED	GLD	N/A	1/2	NO INITIATING PULL, SMOKE, HEAT, W.FLOW, TAMPER, ETC.	4004, 4005, 4090-9001 IDNET IAM, 2190-9174 MAPNET II 2 PT. I/O 4-20MA 24V (TROUBLE)
4081-9005	733-984	1.8K	BRN	GRY	RED	GLD	N/A	1/2	CURRENT LIMITED N.O. INITIATING (INLINE)	4090-9001 IDNET IAM
4081-9006	733-890	560	BRN	BLU	BRN	GLD	N/A	1	N.C. INITIATING (EOLR)	4004, 4005, 4090-9001 IDNET IAM, 4100, 4100U
4081-9007	733-891	1.2K	BRN	RED	RED	GLD	N/A	1	N.C. INITIATING (EOLR)	4004, 4005, 4090-9001 IDNET IAM, 4100, 4100U
4081-9008	733-894	10K	BRN	BLK	ORG	GLD	N/A	1/2	NOTIFICATION	4004, 4005, 4090-9001 IDNET IAM, 4100, 4100U
4081-9009	733-912	20	RED	BLK	BLK	GLD	N/A	1	TO MR-101 RELAY COIL	4005, 4090-9001 IDNET IAM
4081-9010	733-973	1K	BRN	BLK	RED	GLD	N/A	1	N.C. INIT. (ACROSS CONTACTS)	4005, 4090-9001 IDNET IAM
4081-9011	733-974	100	BRN	BLK	BRN	GLD	N/A	1/2	24 PT. I/O (ACROSS CONTACTS)	4005, 4090-9001 IDNET IAM
4081-9012	733-974	100	BRN	BLK	BRN	GLD	N/A	1/2	CURRENT LIMITED N.O. INIT. (IN SERIES WITH CONTACT)	4090-9001 IDNET IAM
4081-9011	733-974	100	BRN	BLK	BRN	GLD	N/A	1/2	ANNUNCIATOR (N2)	4006, 4008, 4010
4081-9012	733-985	22K	RED	RED	ORG	GLD	N/A	1/2	SPEAKER CIRCUIT	4003
4081-9013	734-086	4.5K	YEL	WHT	WHT	BRN	GLD	1/2	N.C. INITIATING (SECURITY MONITORING EOLR)	4090-9001 IDNET IAM
4081-9014	734-092	2.4K	RED	YEL	RED	GLD	N/A	1/2	CURRENT LIMITED N.O. INIT. (SECURITY MONITORING EOLR)	4090-9001 IDNET IAM
4081-9015	734-093	1.5K	BRN	GRN	RED	GLD	N/A	1/2	70VMS CONSTANT SUPV. NAC	4100-1260
4081-9016	734-149	150K	BRN	GRN	YEL	GLD	N/A	1/2	SECURITY MONITORING (EOLR)	4100, 4100U
4081-9017	734-171	3.3K	ORG	WHT	RED	GLD	N/A	1	N.O. SECURITY MON (SERIES)	4100, 4100U
4081-9018	734-188	10K	BRN	BLK	ORG	GLD	N/A	1	N.C. SECURITY MON (SHUNT)	4100, 4100U
4081-9019	734-190	12K	BRN	RED	ORG	GLD	N/A	1/2		
4081-9020	734-191	15K	BRN	RED	ORG	GLD	N/A	1/2		

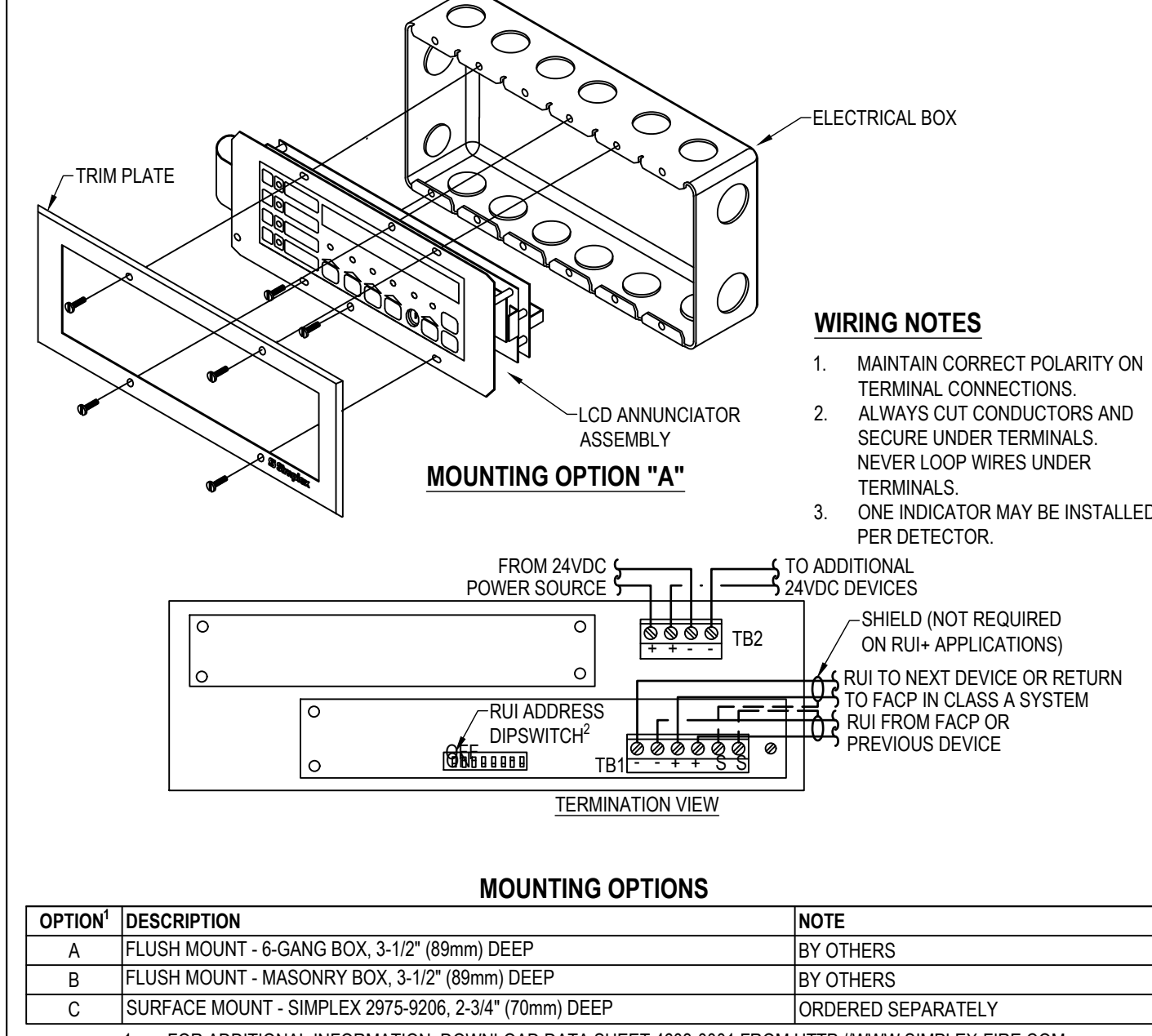
NAC EXTENDER PANEL WIRING

SIMPLEX 4009 SERIES



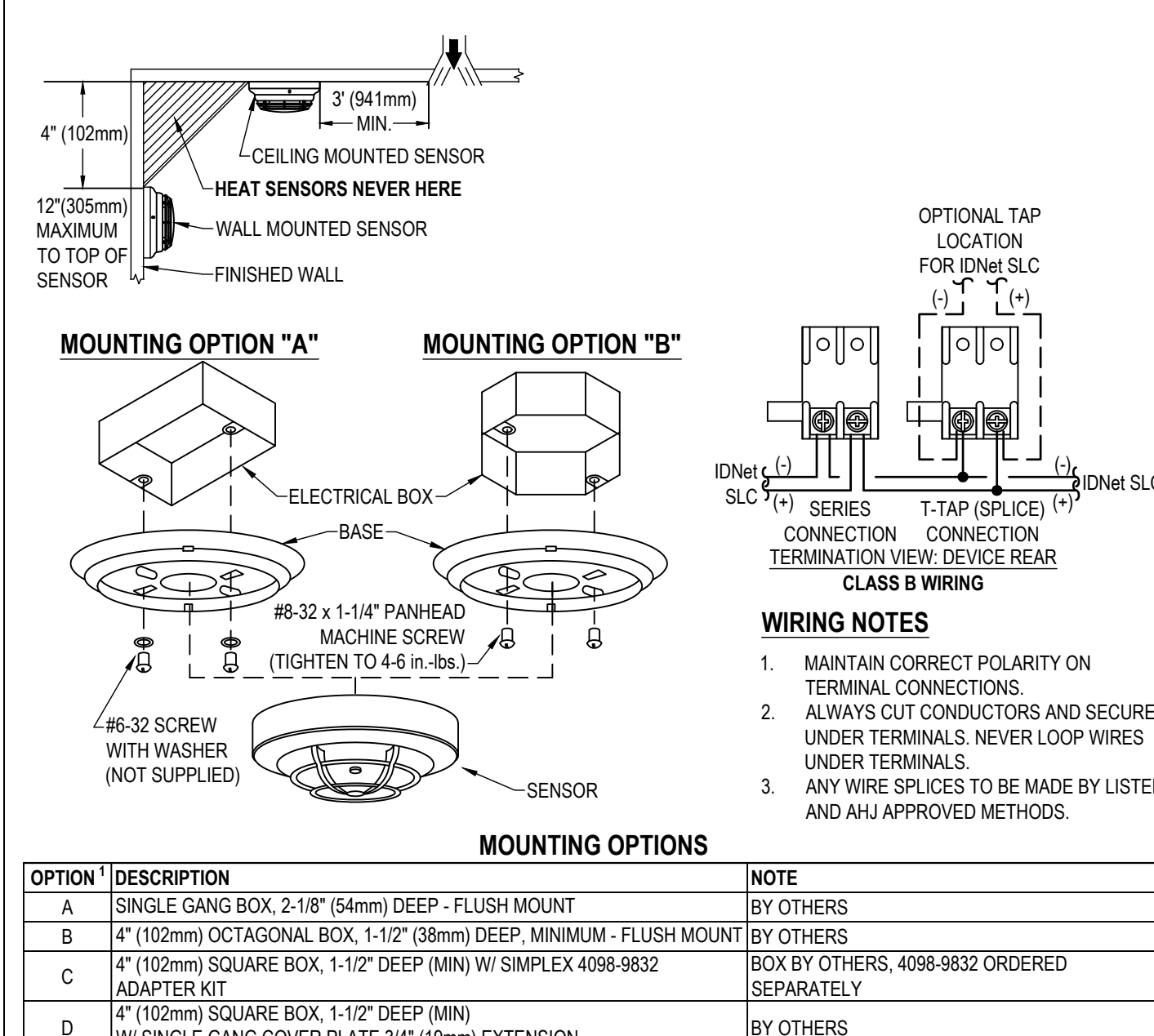
REMOTE ANNUNCIATOR

SIMPLEX 4603-9101



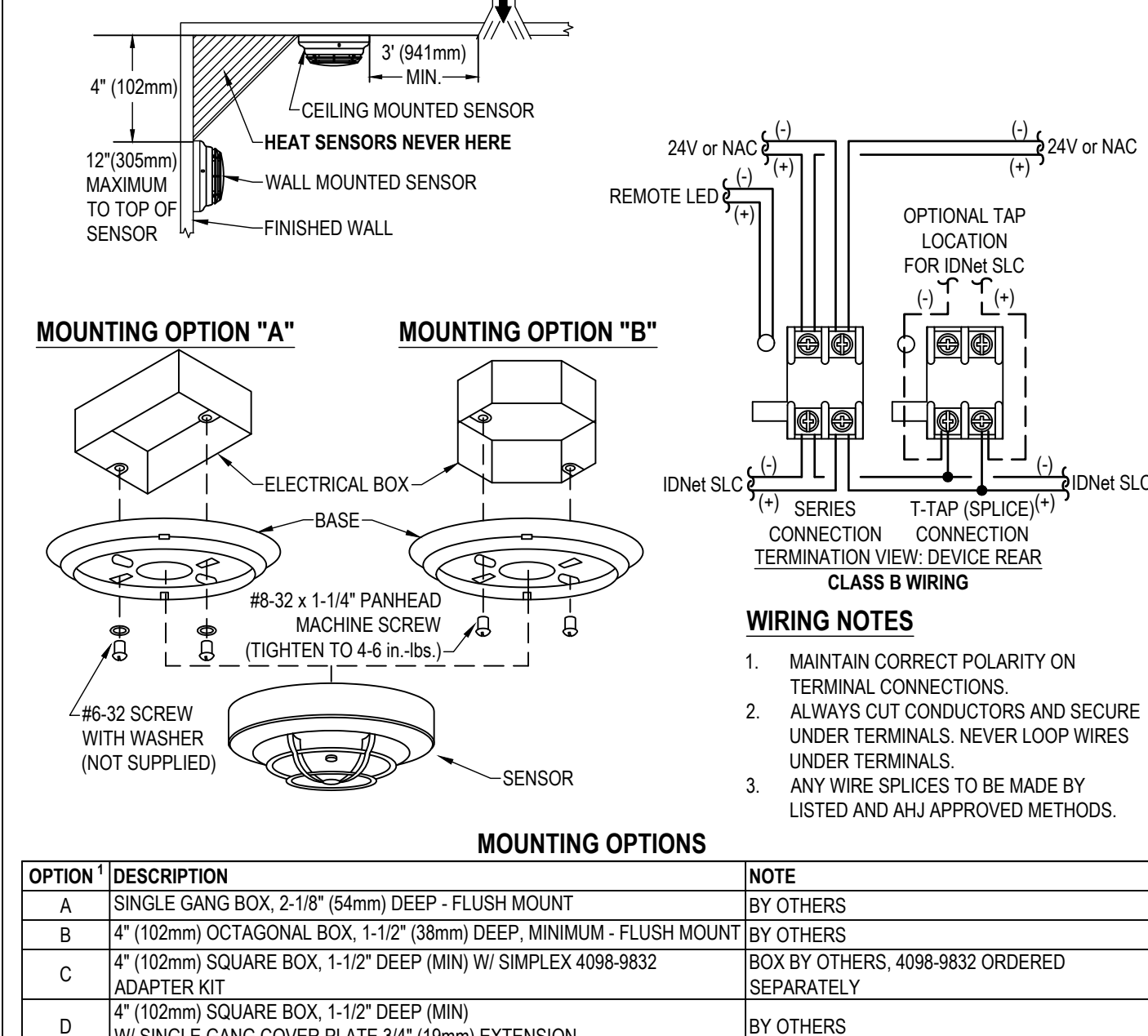
STANDARD SENSOR BASE

SIMPLEX 4098-9792



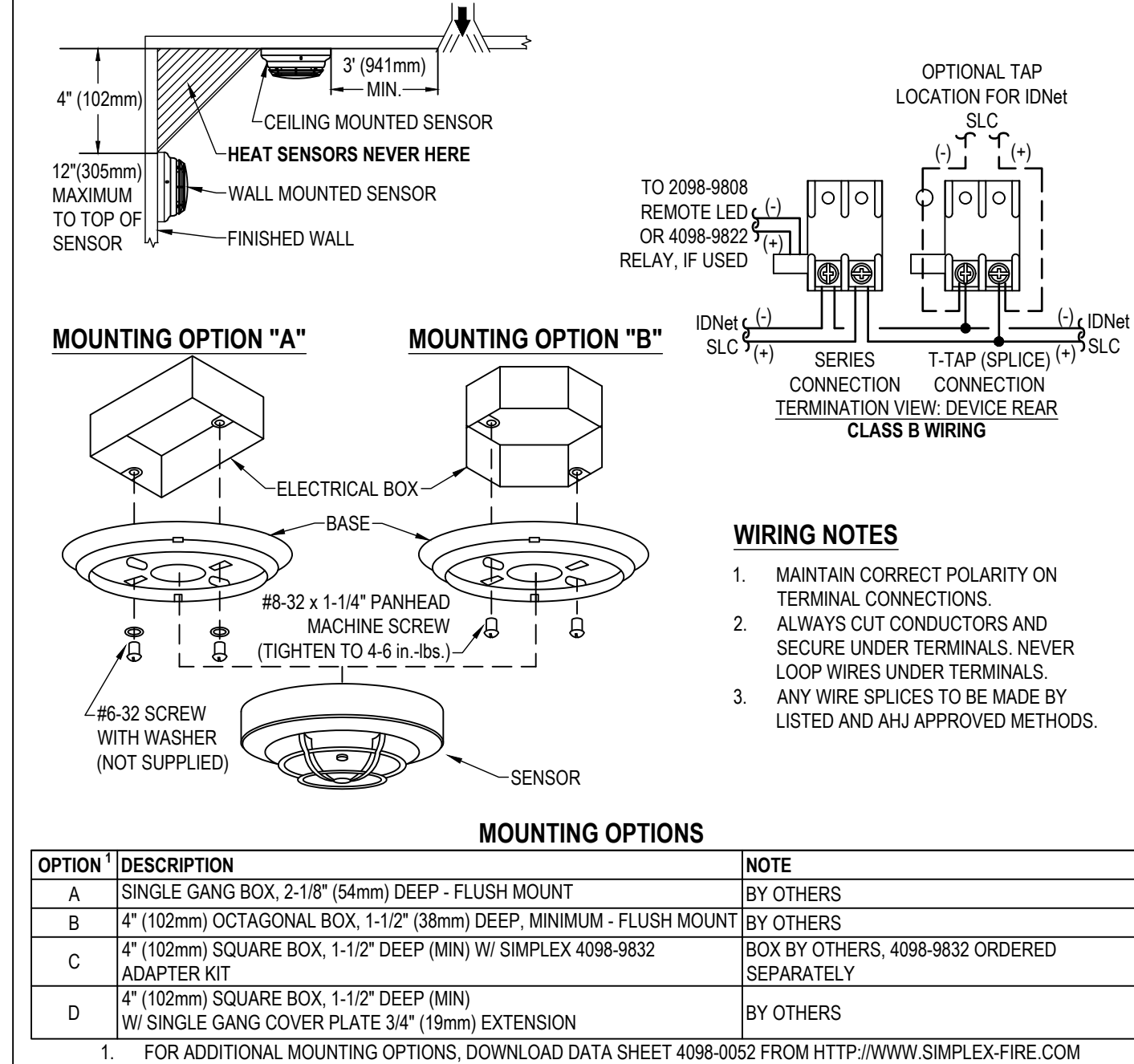
SENSOR BASE WITH 520Hz SOUNDER

SIMPLEX 4098-9772



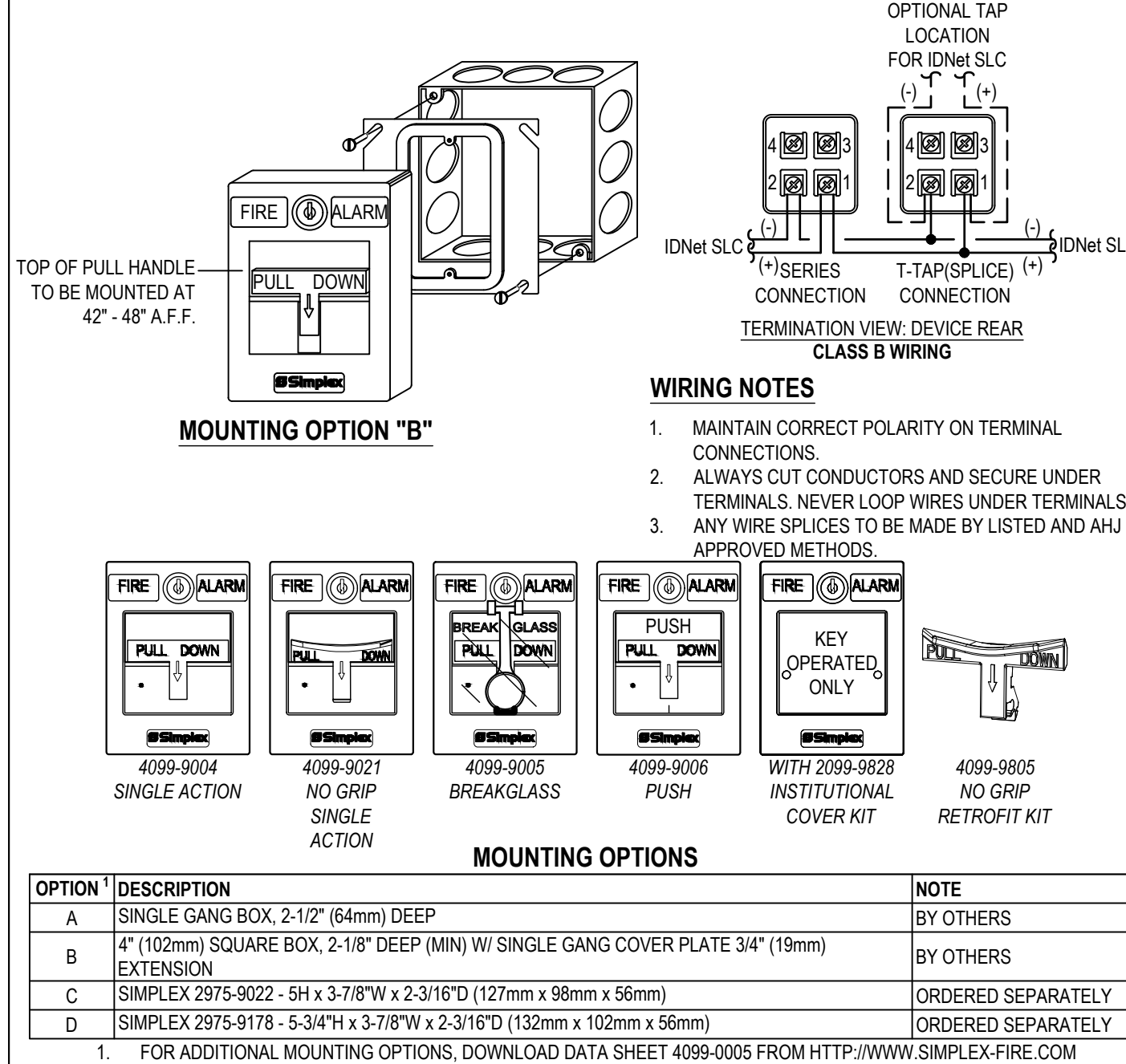
CARBON MONOXIDE SENSOR BASE

SIMPLEX 4098-9770



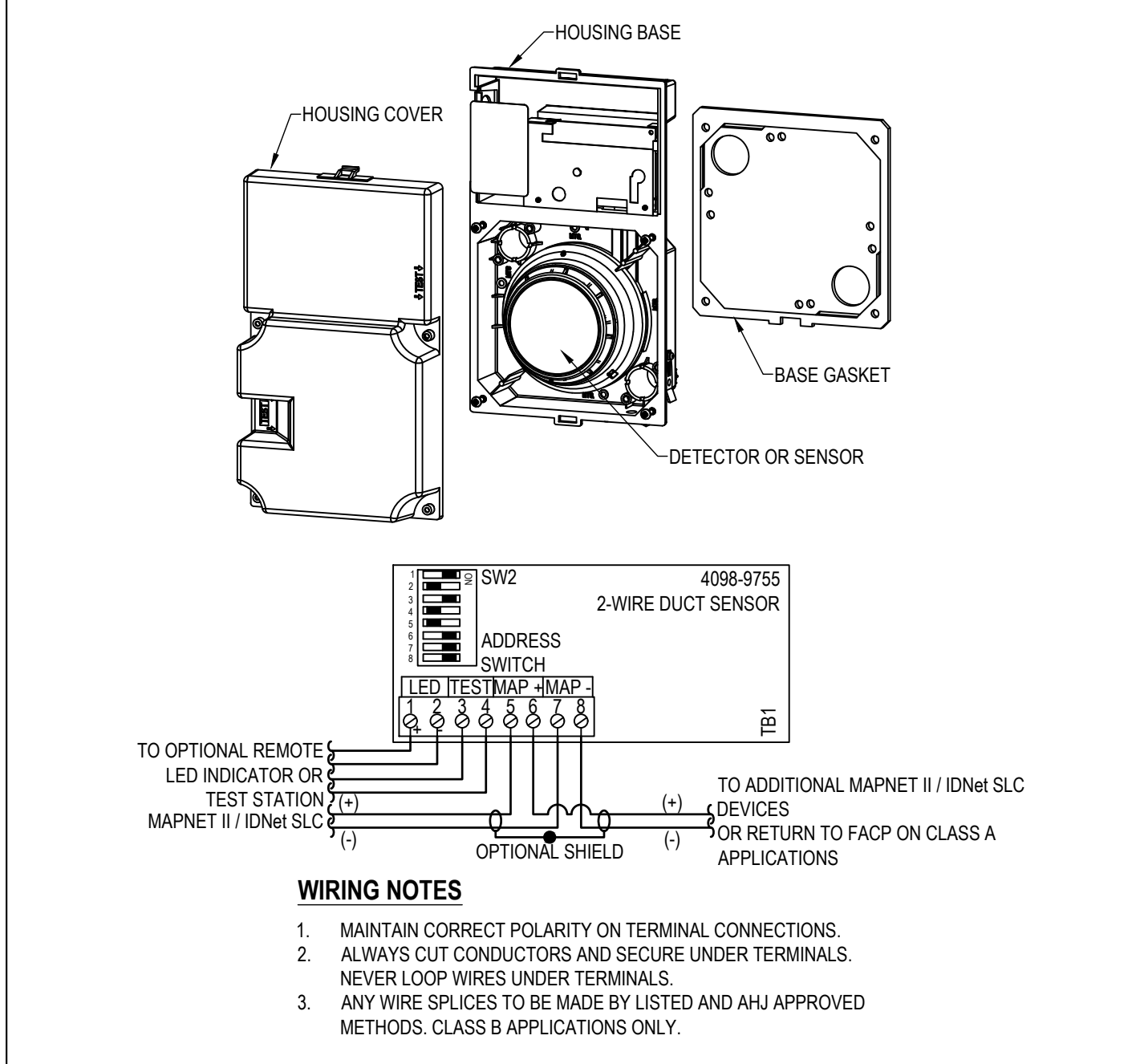
ADDRESSABLE PULL STATIONS

SIMPLEX 4099 SERIES



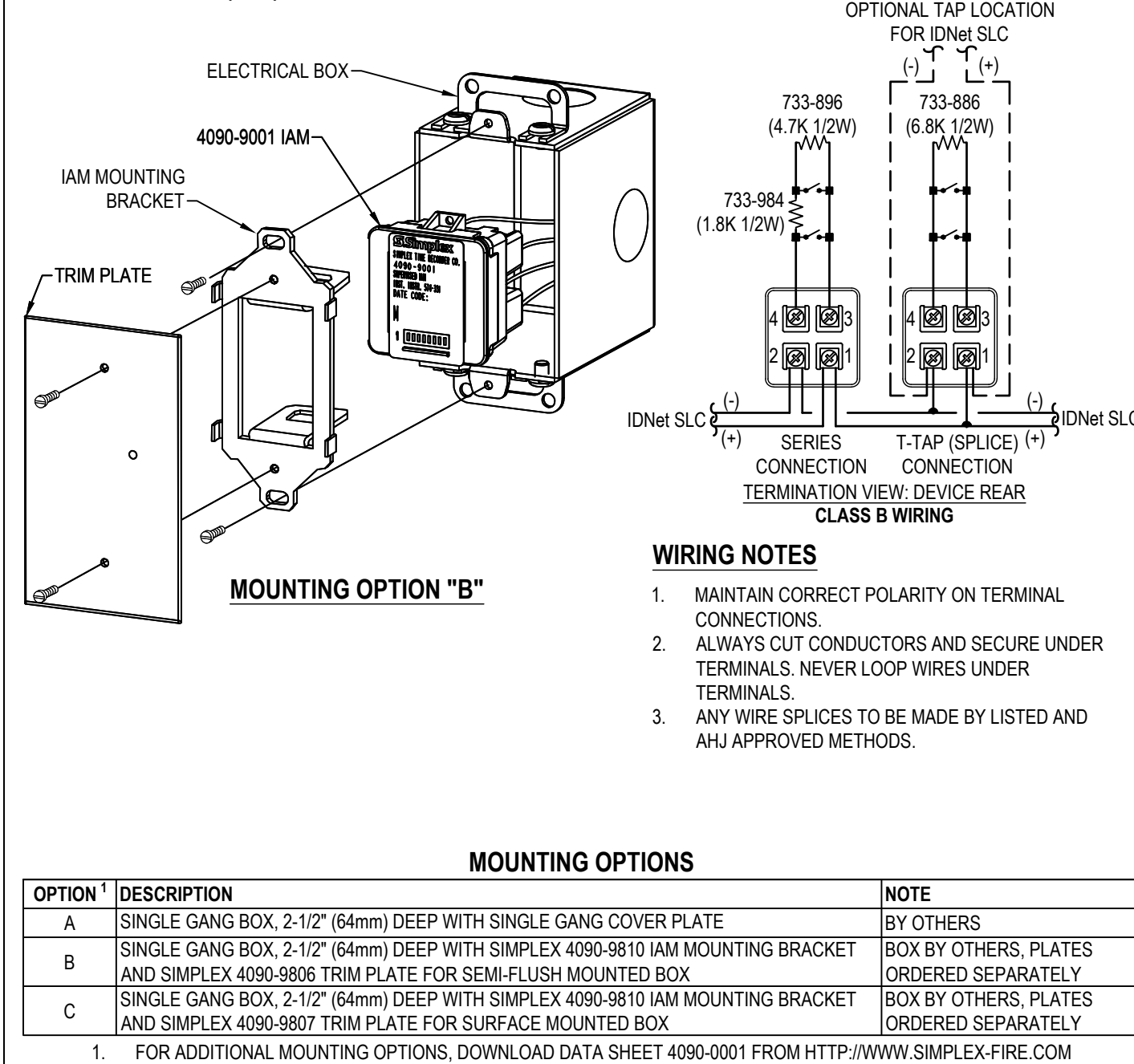
DUCT SMOKE DETECTOR

SIMPLEX 4098-9755 ANALOG 2-WIRE DUCT SENSOR



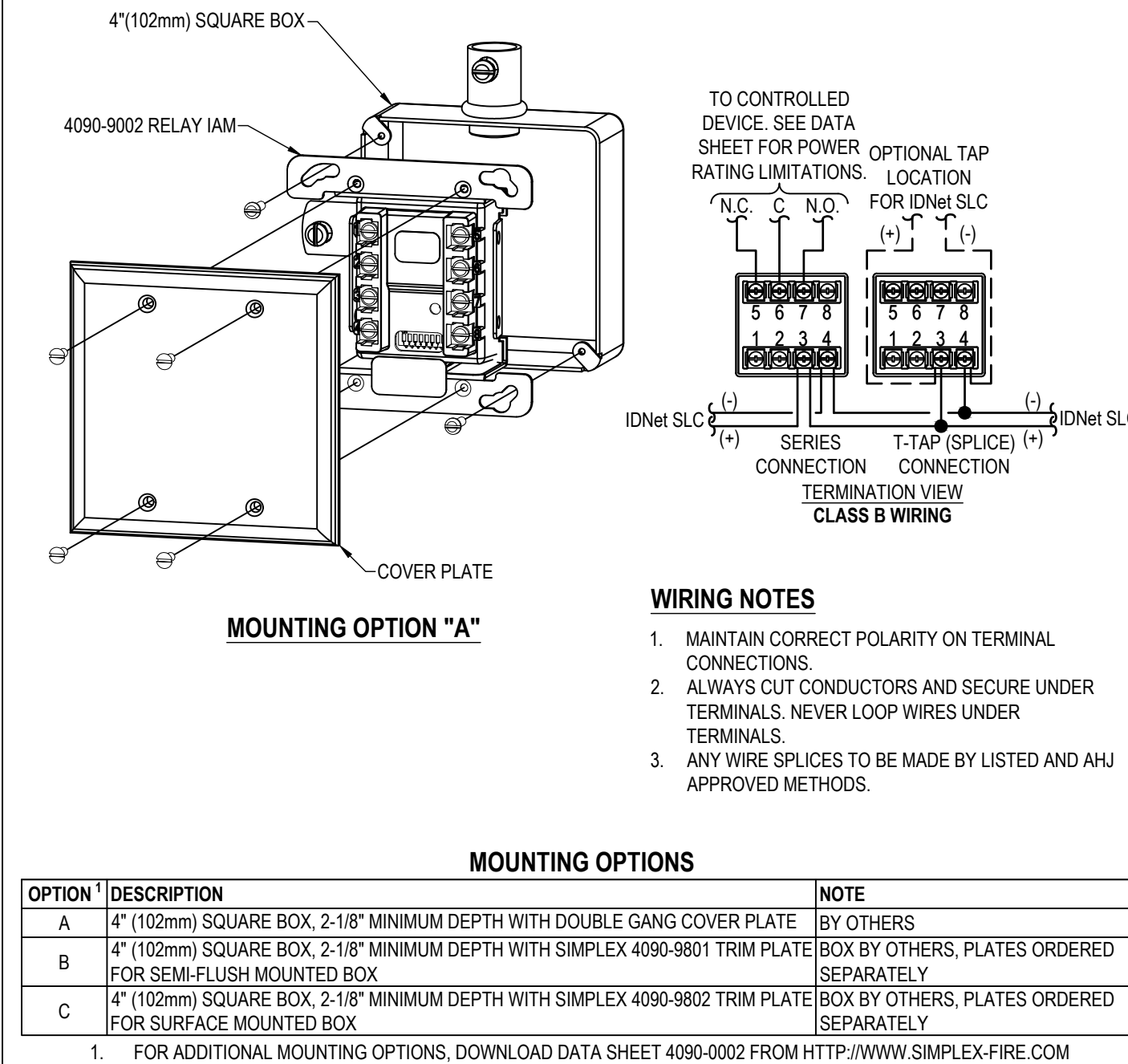
ADDRESSABLE INPUT MODULE

SIMPLEX 4090-9001 (IAM)



ADDRESSABLE RELAY MODULE

SIMPLEX 4090-9002



JOHNSON CONTROLS

JOHN KNOX VILLAGE COURTYARDS BUILDING E

JOHN KNOX VILLAGE
1001 NW CHIPMAN RD
LEE'S SUMMIT, MO 64091

ISSUE NO. 1
DATE 10/22/2024
BY 10/22/2024
CHK 10/22/2024
DESIGN 10/22/2024
REV 10/22/2024
FILE 10/22/2024
MC 10/22/2024

DRAWN BY: MARIANO MENDEZ
CHECKED BY: TIM EUBANKS
ISSUE DATE: 6/10/24
JOB #:
PROJECT # 332-65056984
SYSTEM: FIRE ALARM SYSTEM
SHEET:

WIRING TYPICALS

FA-701

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30" x 42" Arch E Size

DUAL CONTACT RELAY IAM

SIMPLEX 4090-9008

ELECTRICAL BOX
4090-9008 DUAL CONTACT RELAY - IAM

TO CONTROLLED DEVICES. SEE DATA SHEET FOR POWER RATING LIMITATIONS.

OPTIONAL TAP LOCATION FOR IDNet SLC

COVER PLATE

MOUNTING OPTION "A"

WIRING NOTES

1. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS.
2. ALWAYS CUT CONDUCTORS AND SECURE UNDER TERMINALS. NEVER LOOP WIRES UNDER TERMINALS.
3. ANY WIRE SPLICES TO BE MADE BY LISTED AND AHJ APPROVED METHODS (CLASS B ONLY).

MOUNTING OPTIONS

OPTION	DESCRIPTION	NOTE
A	4" (102mm) SQUARE BOX, 2-1/8" MINIMUM DEPTH WITH DOUBLE GANG COVER PLATE.	BY OTHERS
B	4" (102mm) SQUARE BOX, 2-1/8" MINIMUM DEPTH WITH SIMPLEX 4090-9801 TRIM PLATE FOR SEMI-FLUSH MOUNTED BOX.	BOX BY OTHERS, PLATES ORDERED SEPARATELY.
C	4" (102mm) SQUARE BOX, 2-1/8" MINIMUM DEPTH WITH SIMPLEX 4090-9802 TRIM PLATE FOR SURFACE MOUNTED BOX.	BOX BY OTHERS, PLATES ORDERED SEPARATELY.

1. FOR ADDITIONAL MOUNTING OPTIONS, DOWNLOAD DATA SHEET S4090-0014 FROM HTTP://WWW.SIMPLEX-FIRE.COM

ADDRESSABLE RELAY MODULE

SIMPLEX 4090-9118 WITH T-SENSE

ELECTRICAL BOX
4090-9118 RELAY IAM

TO CONTROLLED DEVICE. SEE DATA SHEET FOR POWER RATING LIMITATIONS.

OPTIONAL TAP LOCATION FOR IDNet SLC

COVER PLATE

MOUNTING OPTION "B"

WIRING NOTES

1. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS.
2. ALWAYS CUT CONDUCTORS AND SECURE UNDER TERMINALS. NEVER LOOP WIRES UNDER TERMINALS.
3. ANY WIRE SPLICES TO BE MADE BY LISTED AND AHJ APPROVED METHODS (CLASS B ONLY).
4. T-SENSE INPUT CIRCUITS ARE NOT TO EXCEED 500 FEET. ONLY NORMALLY OPEN (N/O) DRY CONTACTS ARE ALLOWED ON THE INPUT CIRCUITS.

MOUNTING OPTIONS

OPTION	DESCRIPTION	NOTE
A	4" (102mm) SQUARE BOX, 2-1/8" MINIMUM DEPTH WITH DOUBLE GANG COVER PLATE.	BY OTHERS
B	4" (102mm) SQUARE BOX, 2-1/8" MINIMUM DEPTH WITH SIMPLEX 4090-9801 TRIM PLATE FOR SEMI-FLUSH MOUNTED BOX.	BOX BY OTHERS, PLATES ORDERED SEPARATELY.
C	4" (102mm) SQUARE BOX, 2-1/8" MINIMUM DEPTH WITH SIMPLEX 4090-9802 TRIM PLATE FOR SURFACE MOUNTED BOX.	BOX BY OTHERS, PLATES ORDERED SEPARATELY.

1. FOR ADDITIONAL MOUNTING OPTIONS, DOWNLOAD DATA SHEET 4090-0007 FROM HTTP://WWW.SIMPLEX-FIRE.COM

TrueAlert ES ADDRESSABLE APPLIANCES

SIMPLEX 49V0 SERIES WALL MOUNTED VISUAL ONLY

IMPORTANT
DO NOT BRING THE CONDUIT THROUGH THE REAR OF THE ELECTRICAL BOX. STRIP THE LEAD INSULATION TO 7/16" MAX.

ELECTRICAL BOX

MOUNTING PLATE

CANDELA INTENSITY PLUG

TOP OF LENS: 90° (204mm) A F F MAXIMUM FOR CEILING < 86" (2180mm) A F F.; < 6" (150mm) FROM CEILING

BOTTOM OF LENS: 80° (203mm) A F F. MINIMUM

MOUNTING OPTION "B"

WIRING NOTES

1. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS.
2. ALWAYS CUT CONDUCTORS AND SECURE UNDER TERMINALS. NEVER LOOP WIRES UNDER TERMINALS.
3. ANY WIRE SPLICES TO BE MADE BY LISTED AND AHJ APPROVED METHODS.

MOUNTING OPTIONS

OPTION	DESCRIPTION	NOTE
A	SINGLE GANG OR DOUBLE GANG BOX, 1-1/2" (38mm) DEEP (MIN)	BY OTHERS
B	4" (102mm) SQUARE BOX, 1-1/2" DEEP (MIN)	BY OTHERS
C	4" (102mm) SQUARE BOX, 2-1/8" (64mm) DEEP (MIN)	BY OTHERS

1. FOR ADDITIONAL MOUNTING OPTIONS, DOWNLOAD DATA SHEET S49V0-0001 FROM HTTP://WWW.SIMPLEX-FIRE.COM

TrueAlert ES ADDRESSABLE APPLIANCES

SIMPLEX 49SV SERIES WALL MOUNTED SPEAKER / VISUAL

ENTIRE LENS: 80° (203mm) A F F. MINIMUM
90° (204mm) A F F. MAXIMUM
FOR CEILING < 86" (2180mm) A F F.; < 6" (150mm) FROM CEILING

APPLIANCE BACKPLATE

APPLIANCE

CANDELA INTENSITY PLUG

ELECTRICAL BOX

MOUNTING OPTION "A"

IMPORTANT
DO NOT BRING THE CONDUIT THROUGH THE REAR OF THE ELECTRICAL BOX. STRIP THE LEAD INSULATION TO 7/16" MAX.

APPLIANCE COVER

OPTIONAL TAP LOCATION FOR IDNet SLC & AUDIO CIRCUIT

4100S AUDIO CIRCUIT

WIRING NOTES

1. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS.
2. ALWAYS CUT CONDUCTORS AND SECURE UNDER TERMINALS. NEVER LOOP WIRES UNDER TERMINALS.
3. ANY WIRE SPLICES TO BE MADE BY LISTED AND AHJ APPROVED METHODS.

MOUNTING OPTIONS

OPTION	DESCRIPTION	NOTE
A	4" (102mm) SQUARE BOX, 2-1/8" (64mm) DEEP (MIN)	BY OTHERS

1. FOR ADDITIONAL MOUNTING OPTIONS, DOWNLOAD DATA SHEET S49SV-0001 FROM HTTP://WWW.SIMPLEX-FIRE.COM

REMOTE ALARM INDICATOR / KEY SWITCH

SIMPLEX 2098-9806

ENTIRE LENS: 80° (203mm) A F F. MINIMUM
90° (204mm) A F F. MAXIMUM
FOR CEILING < 86" (2180mm) A F F.; < 6" (150mm) FROM CEILING

STANDARD SINGLE GANG ELECTRICAL BOX 2" X 3" 2" MINIMUM DEPTH, SUPPLIED BY ELECTRICAL CONTRACTOR.

CONNECT TO REMOTE ALARM, RED LED OUTPUT OF APPROPRIATE INITIATING DEVICES

CONNECT TO REMOTE TEST SWITCH INPUT ON APPROPRIATE INITIATING DEVICES

WIRING NOTES

1. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS.
2. ALWAYS CUT CONDUCTORS AND SECURE UNDER TERMINALS. NEVER LOOP WIRES UNDER TERMINALS.
3. ONE INDICATOR MAY BE INSTALLED PER DETECTOR.

MAGNETIC SEMI-FLUSH MOUNT DOOR HOLDERS

DH24120F SERIES

SINGLE GANG BOX 2-1/2" DEEP SUPPLIED BY CONTRACTOR

FROM FACE OR PREVIOUS DOOR HOLDER

TO NEXT DOOR HOLDER

WIRING NOTES

1. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS.
2. ALWAYS CUT CONDUCTORS AND SECURE UNDER TERMINALS. NEVER LOOP WIRES UNDER TERMINALS.
3. ANY WIRE SPLICES TO BE MADE BY LISTED AND AHJ APPROVED METHODS.

SEMI-FLUSH MOUNTING

Y = DIMENSION OF DOOR
X = DIMENSION OF DOOR JAMB TO WALL

2. REFER TO DRAWING A CHART TO LOCATE OUTLET BOX
2. INSTALL THE OUTLET BOX ON THE HORIZONTAL CENTER LINE 5" FROM TOP OF DOOR.

PARALLEL CONNECTED SURGE PROTECTOR

DITEK DTK-120HW

HARNESS FIRE ALARM CONTROL PANEL

GROUND

NEUT

TO 120VAC DEDICATED CIRCUIT

DIP SWITCH SETTINGS - INITIATING

SIMPLEX IDNet

ON

OFF

ADDRESS SHOWN ABOVE IS 120

DO NOT USE ADDRESS 0 FOR AN IDNet ADDRESS

DIP SWITCHES 5 THRU 8

NOTE: The 4098-9771, -9794, -9795, -9798 SOUNDER BASES HAVE A 9-POSITION DIP SWITCH. THE FIRST EIGHT DIP SWITCHES SET THE SOUNDER BASE ADDRESS. DIP SWITCH POSITION 9 IS SET TO OFF OR ON DEPENDING UPON THE SOUNDER BASE POWER SOURCE. WHEN THE SOUNDER BASE IS CONNECTED TO A 24 VDC POWER SOURCE, DIP SWITCH POSITION 9 IS SET TO "OFF" AND THE 24 VDC POWER IS SUPERVISED BY THE SOUNDER BASE. WHEN THE SOUNDER BASE IS POWERED BY THE PANEL'S NOTIFICATION APPLIANCE CIRCUIT (NAC), DIP SWITCH POSITION 9 IS SET TO "ON" AND THE POWER IS SUPERVISED BY THE NAC AND NOT THE SOUNDER BASE. THE 4098-9775 AND -9797 BASES HAVE THE SAME LOGIC, BUT DO NOT OFFER SOUNDER FUNCTIONALITY. THEY USE AN 8-WAY DIP SWITCH ONLY.

DIP SWITCH SETTINGS - NOTIFICATION

SIMPLEX TRUEALERT ES / IDNet

ON

OFF

ADDRESS SHOWN ABOVE IS 2

DO NOT USE ADDRESS 0 FOR A SLC ADDRESS

DIP SWITCHES 5 THRU 8

COMMUNICATIONS DIP SWITCH SETTINGS

SIMPLEX RUI (REMOTE UNIT INTERFACE)

ON

OFF

ADDRESS SHOWN ABOVE IS 56

DO NOT USE ADDRESS 0 FOR A RUI ADDRESS

DIP SWITCHES 1 THRU 4

DIP SWITCHES 5 THRU 8

DUCT SMOKE DETECTOR INSTALLATION GUIDE

PRE-INSTALLATION ROUTINES

DUCT DETECTOR/SENSOR SHOULD BE INSTALLED IN A LOCATION OF RELATIVELY NON-TURBULENT AIR FLOW AND WITHIN THE INTENDED OPERATING VELOCITY RANGE OF 300-400 FEET-PER-MINUTE (91 TO 1220 MM/M).

MEASUREMENTS OF AIR FLOW AND EXAMINATION OF ENGINEERING SPECIFICATIONS THAT DEFINE EXPECTED DUCT AIR VELOCITIES UNDER ALL CONDITIONS IS RECOMMENDED. THIS IS DONE TO DETERMINE IF A LOCATION IS SUITABLE FOR DETECTOR/SENSOR OPERATION. AN ALORX INSTRUMENT CO. (CHICAGO) MODEL 3000P VELOMETER OR EQUIVALENT (NOT SUPPLIED) MAY BE USED TO CHECK THE DUCT AIR VELOCITY.

INSTALLATION GUIDELINES

1. LOCATE DUCT HOUSINGS SO THAT DAMPERS DO NOT RESTRICT AIR FLOW AT THE DETECTOR/SENSOR LOCATION. SEE FIGURE 1.
2. LOCATE AIR DUCT DETECTOR/SENSORS ON THE RETURN OR SUPPLY DUCT OF THE EQUIPMENT'S AIR HANDLING SYSTEM. HOWEVER, DETECTOR/SENSORS SHOULD NOT BE INSTALLED IN THE RETURN AIR DAMPER BRANCH. SEE FIGURE 1.
3. LOCATE AIR DUCT DETECTOR/SENSORS ON BRANCH LINES IF CLOSE IDENTIFICATION OF THE ALARM SOURCE IS REQUIRED.
4. LOCATE AIR DUCT DETECTOR/SENSORS ON THE DOWNSTREAM SIDE OF FILTERS TO SENSE FIRE IN FILTERS. HOWEVER, SHOULD THE FILTERS BLOCK SUFFICIENT AIR FLOW MAY NOT BE AVAILABLE FOR PROPER AIR DUCT DETECTOR/SENSOR OPERATION. SEE FIGURE 1.
5. WHENEVER POSSIBLE, LOCATE AIR DUCT DETECTOR/SENSORS WHERE THEY CAN BE CONVENIENTLY OBSERVED AND READILY SERVICED.
6. LOCATE THE AIR DUCT DETECTOR/SENSORS IN RETURN AIR DUCTS AHEAD OF MIXING AREAS.
7. DO NOT LOCATE AIR DUCT DETECTOR/SENSORS NEXT TO OUTSIDE AIR INLETS UNLESS YOU WANT TO MONITOR SMOKE ENTRY TO THE HANDLING SYSTEM FROM AN ADJACENT AREA.
8. LOCATE AIR DUCT DETECTOR/SENSORS UPSTREAM OF AIR HUMIDIFIERS AND COOLING COILS.
9. DO NOT INSTALL THE DUCT DETECTOR HOUSING OR DUCT TUBES IN LOCATIONS THAT EXCEED THE LISTED TEMPERATURE RATINGS FOR THE DEVICE.
10. DO NOT MOUNT THE DUCT HOUSING ON THE BOTTOM OF DUCT.

DUCT DETECTOR/SENSOR INSTALLATION

1. TAPE THE TEMPLATE (SUPPLIED) ON THE DUCT SURFACE. DO NOT POSITION THE TEMPLATE WITH EDGES ANGLED WITH RESPECT TO AIR FLOW DIRECTION. SEE FIGURE 2.
2. DRILL TWO 1/4 INCH (31.75 MM) HOLES (MARKED "A") AS LOCATED BY THE TEMPLATE. REMOVE TEMPLATE AFTER HOLES HAVE BEEN DRILLED.
3. IF THE DUCT IS MORE THAN 3 FEET (0.91 M) WIDE, THEN PUNCH A 1-INCH (25.4 MM) HOLE IN THE DUCT WALL DIRECTLY OPPOSITE THE UPSTREAM 1/4 INCH (31.75 MM) HOLE. SEE FIGURE 3. THIS HOLE IS USED TO SUPPORT THE INLET TUBE.
4. INLET TUBES SHOULD BE SELECTED AND CUT TO LENGTH AS SPECIFIED IN TABLE 1. AFTER TRIMMING THE SLOT, TAP RUBBER PLUG (SUPPLIED) INTO THE TRIMMED END. SEE FIGURE 3.

EXHAUST DAMPER

EXHAUST

DO NOT LOCATE DETECTOR/SENSOR HERE

RETURN AIR

RETURN AIR DAMPER

FRESH AIR INTAKE

DO NOT LOCATE DETECTOR/SENSOR HERE

FILTER BANK

DETECTOR/SENSOR

SUPPLY AIR

DETECTOR/SENSOR

FIGURE 1: DUCT HOUSING PLACEMENT - LOCATION OF DAMPERS**

FIGURE 2: TEMPLATE POSITIONING

FIGURE 3: INLET TUBE ORIENTATION

FIGURE 4: INLET TUBE INSTALLATION

INLET TUBE SELECTION

OVERALL DUCT WIDTH	TUBE REQUIRED	TUBE TYPE	SUGGESTED TOTAL LENGTH
12" (30cm)	4098-9854	13" (33.02cm)	1/2" (1.27cm) LONGER THAN DUCT WIDTH
13" (33.02cm) TO 23" (58cm)	4098-9855	24" (60.96cm)	1/2" (1.27cm) LONGER THAN DUCT WIDTH
24" (60cm) TO 46" (116cm)	4098-9856	46" (125.4cm)	2" (5.08cm) LONGER THAN DUCT WIDTH
46" (116cm) TO 71" (180cm)	4098-9857	73" (185cm)	2" (5.08cm) LONGER THAN DUCT WIDTH
71" (180cm) TO 95" (240cm)	4098-9858	97" (245cm)	2" (5.08cm) LONGER THAN DUCT WIDTH

TABLE 1: INLET TUBE SELECTION

* REFER TO INSTALLATION INSTRUCTION DOCUMENT 574-776 FOR MORE DETAILED INFORMATION.

** WHEN PROVIDING CONTROL FOR A SMOKE DAMPER INSTALLED WITHIN AN AIR TRANSFER OPENING IN A WALL, THE DUCT DETECTOR SHALL BE INSTALLED WITHIN 5 FEET HORIZONTALLY OF THE DAMPER.

DETECTOR LOCATION REQUIREMENTS FOR WALL SECTIONS AND DOORS

NFPA 72

DEPTH OF WALL SECTION ABOVE DOOR

DOOR FRAME MOUNTED

CEILING MOUNTED

SMOKE DETECTOR LISTED FOR FRAME MOUNTING OR AS PART OF CLOSER ASSEMBLY

SMOKE DETECTOR CEILING MOUNTED

DETECTOR OR DETECTOR CLOSER MOUNTED ON EITHER SIDE

ONE DETECTOR MOUNTED ON EITHER SIDE

DETECTOR OR DETECTOR CLOSER MOUNTED ON HIGHER SIDE

ONE DETECTOR MOUNTED ON HIGHER SIDE

TWO DETECTORS REQUIRED

DETECTOR OR DETECTOR CLOSER MOUNTED ON EITHER SIDE

MIGHT REQUIRE ADDITIONAL DETECTORS

Detector location(s)

On centerline of doorway

Door offset from centerline of doorway

On centerline of doorway

On centerline of separation

On centerline of each doorway

On centerline of center door opening

Treat as two or more groups

Treat as two or more groups

Treat as two or more groups

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WIRING TYPICALS

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