

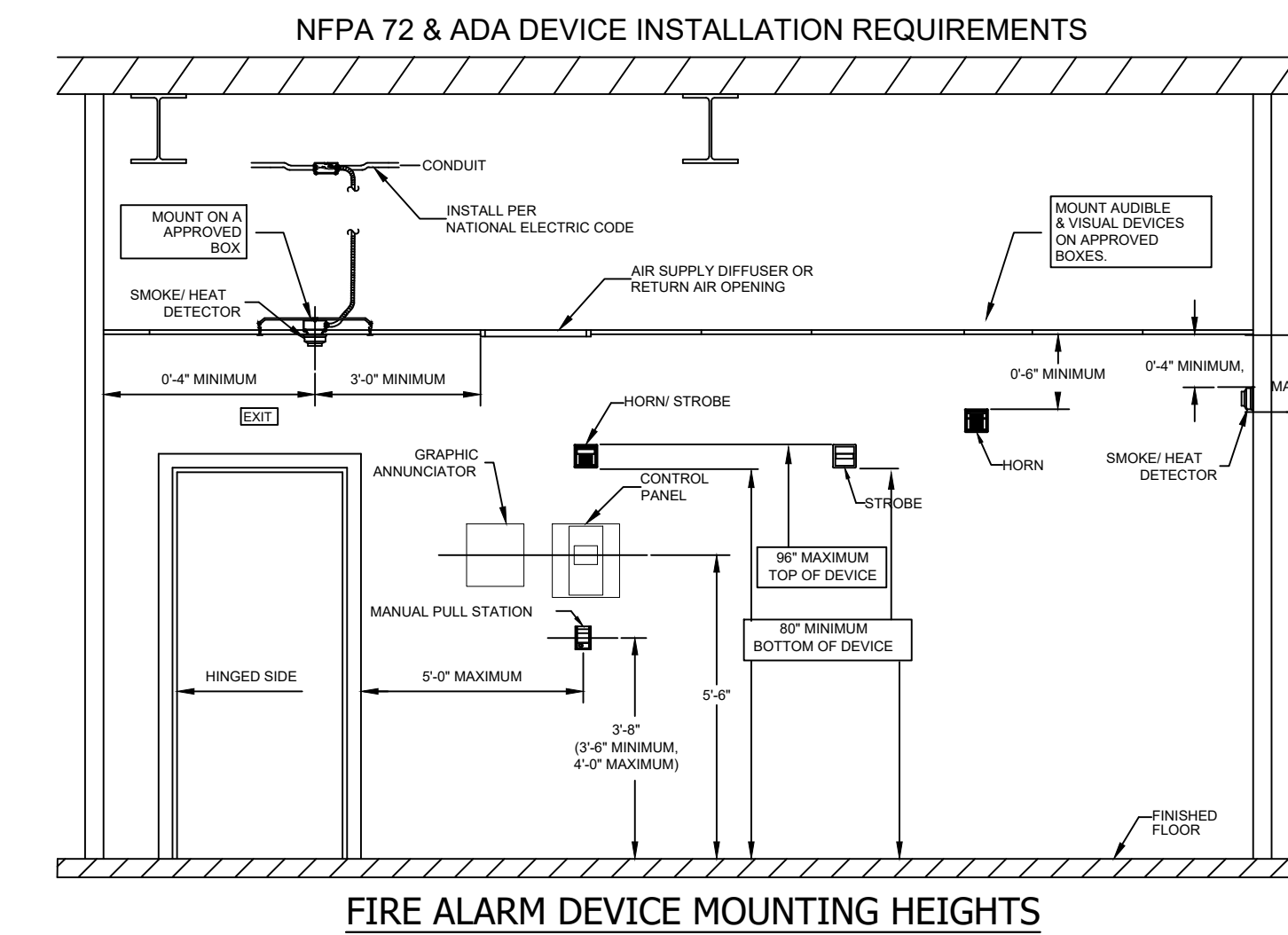
HARNETT COUNTY CENTRAL OFFICE RENOVATIONS LILLINGTON, NORTH CAROLINA

DEVICE LEGEND				
SYMBOL	DEVICE	PART NUMBER	BACK BOX	QTY.
[FACP]	FIRE ALARM CONTROL PANEL	S3 SERIES	N/A	1
[FAA]	REMOTE ANNUNCIATOR	LCD-SLP	N/A	1
[P]	PHOTOELECTRIC SMOKE DETECTOR W/BASE	ASD-PL3.B300-6	4" OCTAGON, 1-1/2" DEEP	3
[D]	DUCT DETECTOR W/SAMPLING TUBE PROVIDED/INSTALLED BY MECHANICAL CONTRACTOR	BY OTHERS	N/A	7
[T]	REMOTE TEST STATION W/ALARM INDICATOR PROVIDED/INSTALLED BY MECHANICAL CONTRACTOR	BY OTHERS	N/A	7
[H]	HEAT DETECTOR W/BASE	ATD-L3R.B300-6	4" OCTAGON, 1-1/2" DEEP	2
[M]	MANUAL PULL STATION	MS-7AF	SINGLE GANG, 1-1/2" DEEP	5
[RM]	RELAY MODULE	AOM-2RF	4" SQUARE, 1-1/2" DEEP	7
[MM]	MONITOR MODULE	AMM-4F	4" SQUARE, 1-1/2" DEEP	7
[HS]	HORN STROBE, RED, CEILING MOUNT	PC2RL	4" SQUARE, 1-1/2" DEEP	32
[SS]	STROBE, RED, CEILING MOUNT	SC2RL	4" SQUARE, 1-1/2" DEEP	3
[WS]	HORN STROBE, RED, WALL MOUNT	P2RL	4" SQUARE, 1-1/2" DEEP	1
[VSP]	120 VAC PANEL SURGE PROTECTOR	E120V-GT	N/A	1

FIRE ALARM NOTES

- FIRE ALARM SYSTEM SHALL BE INSTALLED IN ACCORDANCE TO ALL APPLICABLE STATE AND LOCAL LAWS AND IN ACCORDANCE WITH THE 2013 EDITION OF NFPA 72.
- "cd" RATING IS CALCULATED PER NFPA AND IT IS MINIMUM. PROVIDE MINIMUM OR HIGHER.
- SIGNALING LINE CIRCUITS (SLC) SHALL BE CLASS 'B' STYLE & NOTIFICATION APPLIANCE CIRCUITS (NAC) SHALL BE CLASS 'B' STYLE AS PER 2013-NFPA 72.
- ALL WIRING SHALL BE PER MANUFACTURER'S SPECIFICATIONS.
- SMOKE DETECTORS SHOULD NOT BE LOCATED IN A DIRECT AIR-FLOW, NOR CLOSER THAN THREE FEET FROM AN AIR SUPPLY DIFFUSER.
- THE OPERABLE PART OF A MANUAL STATION SHALL BE NOT LESS THAN 42 INCHES AND NOT MORE THAN 48 INCHES FROM THE FINISHED FLOOR.
- USE ONLY MANUFACTURER SUPPLIED KNOCKOUTS WHEN BRINGING CONDUITS INTO CONTROL PANELS. DO NOT BRING CONDUIT INTO THE BOTTOM OF CONTROL PANELS.
- DEDICATED AC SOURCE FOR THE FIRE ALARM SYSTEM IS REQUIRED. THIS BREAKER(S) MUST BE CLEARLY IDENTIFIED AT EACH PANEL. BREAKER TO BE IDENTIFIED BY A RED MARKING AND LOCKED IN THE "ON" POSITION.
- NOTIFY W/SC BEFORE CHANGING ANY WIRE PATHS TO NOTIFICATION APPLIANCES. THIS WILL AFFECT VOLTAGE LOSS CALCULATIONS.
- W/SC WILL PROVIDE FRAMED BUILDING LAYOUT NEXT TO REMOTE ANNUNCIATOR AND FACP. BUILDING LAYOUT WILL SHOW FIRE ALARM DEVICE LOCATIONS AND THEIR RESPECTIVE ADDRESSES.

WIRE LEGEND		
SYMBOL	DESCRIPTION	WIRE TYPE/SIZE
SLCX	SIGNALING LINE CIRCUIT (SLC)	16/2 FPLP TWISTED PAIR, SOLID, NO SHIELD
NACX	NOTIFICATION APPLIANCE CIRCUIT (NAC)	14/2 FPLP STRANDED
FAA	ANNUNCIATOR DATA	16/4 FPLP TWISTED PAIR, SOLID, NO SHIELD
24V	24 VDC POWER	14/2 FPLP STRANDED
IDC	INITIATING DEVICE CIRCUIT	14/2 FPLP STRANDED
SYX	NAC SYNC CIRCUIT	14/2 FPLP STRANDED
RTS	REMOTE TEST STATION	18/4 FPLP SOLID
RAI	REMOTE ALARM INDICATOR	18/2 FPLP SOLID



PANEL FACP (SLP-BLK) BATTERY CALCULATION (SECONDARY POWER SOURCE REQUIREMENTS)							
PANEL COMPONENTS	QTY	PART NO.	DESCRIPTION	STANDBY CURRENT (AMPS)		SECONDARY ALARM CURRENT (AMPS)	
				CURRENT DRAW (A)	TOTAL (A)	CURRENT DRAW (A)	TOTAL (A)
PANEL COMPONENTS	1	DACT-E3	Dact Card	0.018	0.018	0.018	0.018
	1	FLPS-7-RB	7 amp Power Supply	0	0	0	0
	1	RPT-E3-UTP	Repeater Module-Twisted-pair	0.016	0.016	0.017	0.017
	1	SLC-PM	SLC LOOP, S3 Series	0.014	0.014	0.014	0.014
CIRCUIT	1	SLP-E3	Intelligent Loop Interface-Main Board	0.1	0.1	0.18	0.18
	1	SLP-E3	Intelligent Loop Interface-Main Board	0.1	0.1	0.18	0.18
FACP-MANN	1	LCD-SLP	LCD Touchscreen Display	0	0	0	0
FACP-L1	7	AMM-4F	Addressable Monitor Module W/ FlashScan Supervises Class A or Class B of Dry Contact Input	0.000375	0.002625	0.005	0.035
	7	AOM-2RF	Addressable Relay Module W/ FlashScan, 2 Form-C Dry Contacts	0.000375	0.002625	0.005	0.0455
	3	ASD-PL3B-300-6	DETECTOR, SMOKE, ADDRESSABLE PHOTO W/STANDARD BASE, BRIGHT WHITE	0.0002	0.0006	0.002	0.006
	2	ATD-L3R300-6	Intelligent Addressable 135°F (57°C) Fixed Thermal Detector Velociti, Bright White	0.0002	0.0004	0.002	0.004
FACP-NAC1	1	P2RL	2-Wire, Hom Strobe, Red 30cd	0	0	0.073	0.073
	7	PC2RL	2-Wire, Hom Strobe, Red 15cd	0	0	0.071	0.497
	4	PC2RL	2-Wire, Hom Strobe, Red 30cd	0	0	0.09	0.36
	3	PC2RL	2-Wire, Hom Strobe, Red 75cd	0	0	0.143	0.429
	2	SC2RL	Strobe, Red 30cd	0	0	0.063	0.126
	8	PC2RL	2-Wire, Hom Strobe, Red 15cd	0	0	0.071	0.568
FACP-NAC2	10	PC2RL	2-Wire, Hom Strobe, Red 30cd	0	0	0.09	0.9
	1	SC2RL	Strobe, Red 30cd	0	0	0.063	0.063
TOTAL STANDBY (A)				0.15575		TOTAL ALARM (A)	3.3505
REQUIRED STANDBY TIME = 24 HOURS						REQUIRED ALARM TIME = 5 MINUTES	
SECONDARY STANDBY LOAD (A)				0.15575	24	3.74	
SECONDARY ALARM LOAD (A)				3.3505	0.08	0.28	
STANDBY AND ALARM SUBTOTAL (AMP HOURS)						4.02	
DERATING FACTOR						1.2	
SECONDARY LOAD REQUIREMENTS (AMP HOURS)						4.82	
PROVIDE (2) 12V 7AH BATTERIES							
*BATTERY BOX SIZE CAPACITY NOT SPECIFIED. REFER TO MANUFACTURER DOCUMENTATION.							

FACP NAC1 POINT-TO-POINT REPORT									
Circuit Wiring Properties: #14 AWG, 2 Cond. Solid Copper FPLR Analog Unshielded									
Distance measured using drawn segment lengths with 10.00 % additional length calculated									
Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Percentage
NAC1-001	P2RL	2-Wire, Hom Strobe, Red 30cd	0.073	1.485	31	0.192983	0.29	20.11	1.40 %
NAC1-002	PC2RL	2-Wire, Hom Strobe, Red 30cd	0.09	1.412	44	0.26873	0.38	19.73	3.26 %
NAC1-003	PC2RL	2-Wire, Hom Strobe, Red 15cd	0.071	1.322	28	0.169682	0.22	19.51	4.36 %
NAC1-004	PC2RL	2-Wire, Hom Strobe, Red 15cd	0.071	1.251	26	0.162215	0.2	19.31	5.36 %
NAC1-005	PC2RL	2-Wire, Hom Strobe, Red 15cd	0.071	1.18	29	0.1754	0.21	19.1	6.37 %
NAC1-006	PC2RL	2-Wire, Hom Strobe, Red 15cd	0.071	1.109	40	0.243113	0.27	18.83	7.70 %
NAC1-007	SC2RL	Strobe, Red 30cd	0.063	1.038	31	0.189119	0.2	18.63	8.66 %
NAC1-008	PC2RL	2-Wire, Hom Strobe, Red 15cd	0.071	0.975	18	0.107665	0.1	18.53	9.17 %
NAC1-009	PC2RL	2-Wire, Hom Strobe, Red 15cd	0.071	0.904	26	0.162524	0.15	18.38	9.89 %
NAC1-010	PC2RL	2-Wire, Hom Strobe, Red 75cd	0.143	0.833	20	0.12084	0.1	18.28	10.39 %
NAC1-011	PC2RL	2-Wire, Hom Strobe, Red 30cd	0.09	0.69	32	0.19724	0.14	18.15	11.05 %
NAC1-012	PC2RL	2-Wire, Hom Strobe, Red 30cd	0.09	0.6	20	0.122162	0.07	18.07	11.41 %
NAC1-013	SC2RL	Strobe, Red 30cd	0.063	0.51	29	0.178948	0.09	17.98	11.88 %
NAC1-014	PC2RL	2-Wire, Hom Strobe, Red 15cd	0.071	0.447	27	0.169123	0.08	17.91	12.23 %
NAC1-015	PC2RL	2-Wire, Hom Strobe, Red 30cd	0.09	0.376	37	0.228194	0.09	17.82	12.65 %
NAC1-016	PC2RL	2-Wire, Hom Strobe, Red 15cd	0.143	0.286	30	0.181605	0.05	17.77	12.90 %
NAC1-017 EOL	PC2RL	2-Wire, Hom Strobe, Red 75cd	0.143	0.143	26	0.159977	0.02	17.74	13.02 %

FACP NAC2 POINT-TO-POINT REPORT									
Circuit Wiring Properties: #14 AWG, 2 Cond. Solid Copper FPLR Analog Unshielded									
Distance measured using drawn segment lengths with 10.00 % additional length calculated									
Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Percentage
NAC2-001	PC2RL	2-Wire, Hom Strobe, Red 30cd	0.09	1.531	14	0.086233	0.13	20.27	0.65 %
NAC2-002	PC2RL	2-Wire, Hom Strobe, Red 15cd	0.071	1.441	28	0.170873	0.25	20.02	1.85 %
NAC2-003	PC2RL	2-Wire, Hom Strobe, Red 15cd	0.071	1.37	42	0.256501	0.35	19.67	3.58 %
NAC2-004	PC2RL	2-Wire, Hom Strobe, Red 15cd	0.071	1.299	37	0.229732	0.3	19.37	5.04 %
NAC2-005	PC2RL	2-Wire, Hom Strobe, Red 30cd	0.09	1.228	13	0.082195	0.1	19.27	5.53 %
NAC2-006	SC2RL	Strobe, Red 30cd	0.063	1.138	21	0.130346	0.15	19.12	6.26 %
NAC2-007	PC2RL	2-Wire, Hom Strobe, Red 30cd	0.09	1.075	21	0.126404	0.14	18.99	6.93 %
NAC2-008	PC2RL	2-Wire, Hom Strobe, Red 30cd	0.09	0.985	24	0.148814	0.15	18.84	7.65 %
NAC2-009	PC2RL	2-Wire, Hom Strobe, Red 30cd	0.09	0.895	20	0.125134	0.11	18.73	8.20 %
NAC2-010	PC2RL	2-Wire, Hom Strobe, Red 30cd	0.09	0.805	15	0.089361	0.07	18.66	8.55 %
NAC2-011	PC2RL	2-Wire, Hom Strobe, Red 30cd	0.09	0.715	19	0.114916	0.08	18.57	8.85 %
NAC2-012	PC2RL	2-Wire, Hom Strobe, Red 30cd	0.09	0.625	23	0.141257	0.09	18.49	9.38 %
NAC2-013	PC2RL	2-Wire, Hom Strobe, Red 30cd	0.09	0.535	17	0.105224	0.06	18.43	9.66 %
NAC2-014	PC2RL	2-Wire, Hom Strobe, Red 15cd	0.071	0.445	28	0.171941	0.08	18.35	10.03 %
NAC2-015	PC2RL	2-Wire, Hom Strobe, Red 15cd	0.071	0.374	19	0.117884	0.04	18.31	10.25 %
NAC2-016	PC2RL	2-Wire, Hom Strobe, Red 15cd	0.071	0.303	14	0.088367	0.03	18.28	10.38 %
NAC2-017	PC2RL	2-Wire, Hom Strobe, Red 15cd	0.071	0.232	8	0.047	0.01	18.27	10.44 %
NAC2-018	PC2RL	2-Wire, Hom Strobe, Red 15cd	0.071	0.161	29	0.179671	0.03	18.24	10.58 %
NAC2-019 EOL	PC2RL	2-Wire, Hom Strobe, Red 30cd	0.09	0.09	24	0.146973	0.01	18.23	10.64 %

SYSTEM INPUTS		SYSTEM OUTPUTS																
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	FIRE ALARM SYSTEM AC POWER FAILURE																	
2	FIRE ALARM SYSTEM LOW BATTERY																	
3	OPEN CIRCUIT																	
4	GROUND FAULT																	
5	NOTIFICATION APPLIANCE CIRCUIT SHORT																	
6	BUILDING MANUAL PULL STATIONS																	
7	AREA HEAT DETECTORS																	
8	AREA SMOKE DETECTORS																	
9	HVAC AIR DUCT SMOKE DETECTORS																	
10																		
11																		
12																		
13																		
14																		
15																		
16																		

BY	DESCRIPTION
REV	DATE



WILLIAMS FIRE SPRINKLER COMPANY, INC.
EST. 1972
PHONE #: 252-792-2196
FAX #: 252-792-6683
EMAIL: INFO@WILLIAMSFIRESPRINKLER.COM
WEBSITE: WWW.WILLIAMSFIRESPRINKLER.COM
PHYSICAL ADDRESS: 601 S. MAIN STREET, LILLINGTON, N.C. 27802
MAILING ADDRESS: 601 S. MAIN STREET, LILLINGTON, N.C. 27802



HARNETT COUNTY CENTRAL OFFICE RENOVATION
601 S. MAIN STREET
LILLINGTON, NC

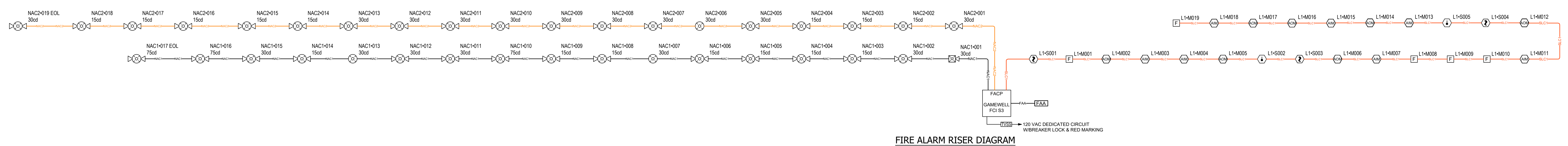
TITLE:
FIRE ALARM SYMBOL LEGEND & NOTES

DRAWN BY: WTD
APPROVED: AHJ
DATE: 01/23/23
DATE: PENDING

JOB NUMBER:
27807318
DRAWING NUMBER:
3413
SCALE:
1/8"=1'-0"

SHEET: **FA-1** REV:

- KEYED NOTES**
- 1 DUCT DETECTOR AND SAMPLING TUBE PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR. COORDINATE WITH MECHANICAL CONTRACTOR ON LOCATION OF MONITOR MODULE AND RELAY MODULE.
 - 2 REMOTE TEST STATION/INDICATOR LIGHT PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR.



1 FIRE ALARM PLAN
FA-2 Scale: 1/8"=1'-0"

BY	DESCRIPTION
REV	DATE



WILLIAMS FIRE SPRINKLER COMPANY, INC.
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PROJECT:
HARNETT COUNTY CENTRAL OFFICE RENOVATION
 601 S. MAIN STREET
 LILLINGTON, NC

TITLE:
 FIRE ALARM PLAN & RISER DIAGRAM

DRAWN BY: WTD	DATE: 01/23/23
APPROVED: AHJ	DATE: PENDING

JOB NUMBER:
27807318

DRAWING NUMBER:
3413

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

SHEET FA-2	REV:
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