NFPA SYMBOLS LEGEND FCP FIRE ALARM CONTROL PANEL PULL STATION SMOKE DETECTOR WALL HORN ONLY HORN/STROBE WALL LOW FREQUENCY OUTSIDE HORN/STROBE FOR WATER FLOW STROBE ONLY FLOW DETECTOR/SWITCH TAMPER DETECTOR 18/2 CABLE SLC LOOP 14/2 OR 16/2 AS REQUIRED, CABLE NAC LOOP EOL END-OF-LINE RESISTOR * ALL SYMBOLS SHOWN ABOVE MAY NOT APPEAR ON PLANS

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1. SYSTEM IS AN ADDRESSABLE SUPERVISED PROTECTED PREMISES SYSTEM.

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1 04/02/2024 City Response

DATE **03.15.2023**

JOB NO. **705921 DRAWN BY Author**

CONSULTING ENGINEERS BUILDING 1 OVERALL FIRST FLOOR PLAN 3639 SW Summerfield Drive, Suite A Topeka, Kansas 6614-3974 8625 College Boulevard, Suite 102 Overland Park, Kansas 66210 Telephone: (785) 233-3232 Email: Isapa@Isapa.com LSA PROJECT NO. 2204061



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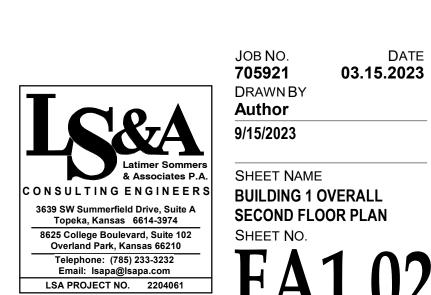
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1 04/02/2024 City Response



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NFPA SYMBOLS LEGEND

HORN/STROBE WALL LOW FREQUENCY OUTSIDE HORN/STROBE FOR WATER FLOW

14/2 OR 16/2 AS REQUIRED, CABLE NAC LOOP

* ALL SYMBOLS SHOWN ABOVE MAY NOT APPEAR ON PLANS

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LOCAL LAWS, REGULATIONS, CODES, AND SPECIFICATIONS.

THE FIRE ALARM CONTROL PANEL (FACP) ONLY.

FCP FIRE ALARM CONTROL PANEL PULL STATION SMOKE DETECTOR WALL HORN ONLY

STROBE ONLY

EOL END-OF-LINE RESISTOR

FLOW DETECTOR/SWITCH

TAMPER DETECTOR 18/2 CABLE SLC LOOP

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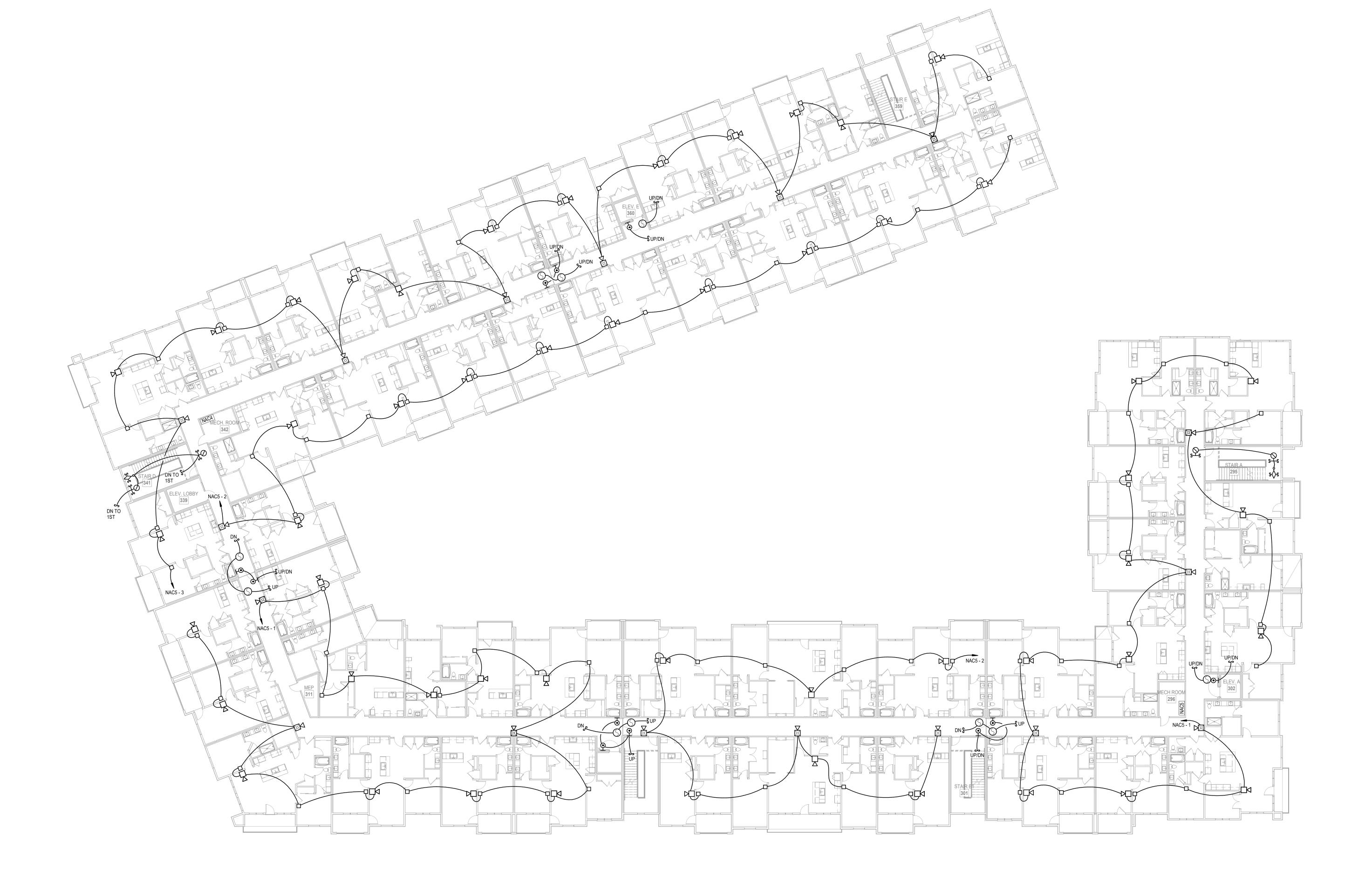
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BUILDING 1 - OVERALL 3RD FLOOR PLAN

FIRE ALARM
1/16" = 1'-0"

CONSULTING ENGINEERS 3639 SW Summerfield Drive, Suite A
Topeka, Kansas 6614-3974

8625 College Boulevard, Suite 102
Overland Park, Kansas 66210

Telephone: (785) 233-3232
Email: Isapa@Isapa.com

LSA PROJECT NO. 2204061

JOB NO. **705921** DATE **03.15.2023 DRAWN BY** Author BUILDING 1 OVERALL THIRD FLOOR PLAN

1 04/02/2024 City Response

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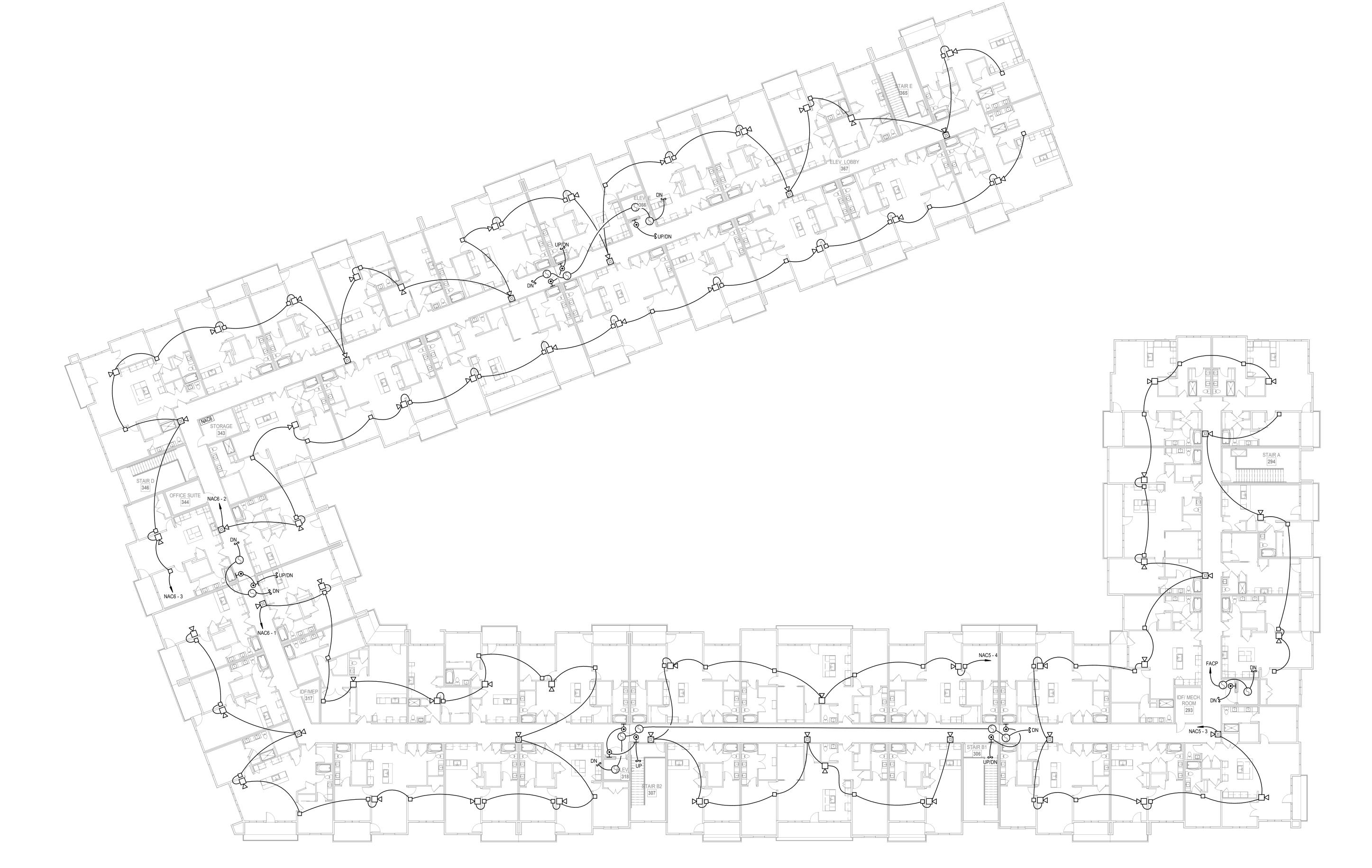
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NFPA SYMBOLS LEGEND FCP FIRE ALARM CONTROL PANEL EOL END-OF-LINE RESISTOR * ALL SYMBOLS SHOWN ABOVE MAY NOT APPEAR ON PLANS





1 04/02/2024 City Response



BUILDING 1 - OVERALL 4TH FLOOR PLAN

FIRE ALARM
1/16" = 1'-0"

DATE **03.15.2023**

GARAGE GARAGE 128

BIKE STORAGE

GARAGE 126

GARAGE GARAGE

NFPA SYMBOLS LEGEND FCP FIRE ALARM CONTROL PANEL PULL STATION SMOKE DETECTOR WALL HORN ONLY HORN/STROBE WALL LOW FREQUENCY OUTSIDE HORN/STROBE FOR WATER FLOW STROBE ONLY FLOW DETECTOR/SWITCH TAMPER DETECTOR 18/2 CABLE SLC LOOP 14/2 OR 16/2 AS REQUIRED, CABLE NAC LOOP EOL END-OF-LINE RESISTOR * ALL SYMBOLS SHOWN ABOVE MAY NOT APPEAR ON PLANS

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DRAWING RELEASE LOG

• 03.15.2023 - PERMIT SUBMITTAL

 \triangle REVISIONS

1 04/02/2024 City Response

2 BUILDING 2 - OVERALL BASEMENT FLOOR PLAN

FIRE ALARM
1/16" = 1'-0" NORTH

CONSULTING ENGINEERS

JOB NO. **705921** DATE **03.15.2023 DRAWN BY** Author SHEET NAME BUILDING 2 OVERALL FIRST FLOOR PLAN 3639 SW Summerfield Drive, Suite A
Topeka, Kansas 6614-3974

8625 College Boulevard, Suite 102
Overland Park, Kansas 66210
Telephone: (785) 233-3232
Email: Isapa@Isapa.com
LSA PROJECT NO. 2204061

BUILDING 2 - OVERALL 1ST FLOOR PLAN

FIRE ALARM
1/16" = 1'-0"

STORAGE STORAGE

GARAGE GARAGE 120 122

ALL FIRE ALARM WIRING MUST BE IN STRICT COMPLIANCE WITH APPLICABLE SECTIONS OF THE NATIONAL ELECTRICAL CODE (ARTICLE 760) AND ALL

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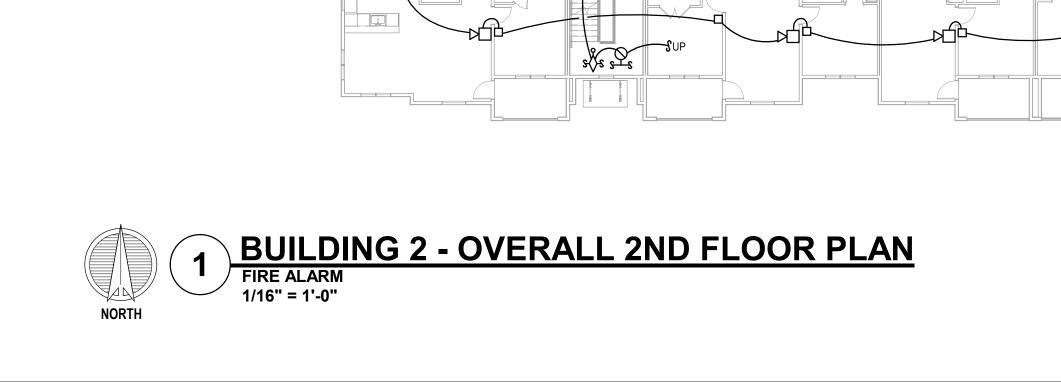


SAFETY UNIT. ELEVATORS WILL COMPLY WITH ASME A17.1 2019 EDITION.

1 04/02/2024 City Response

DATE **03.15.2023**







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1 04/02/2024 City Response

DATE **03.15.2023**



SHEET NAME BUILDING 2 OVERALL THIRD FLOOR PLAN

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- mmmmm

NFPA SYMBOLS LEGEND



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1 04/02/2024 City Response

DATE **03.15.2023**







1 BUILDING 1
NOT TO SCALE

NFPA SYMBOLS LEGEND FCP FIRE ALARM CONTROL PANEL PULL STATION SMOKE DETECTOR WALL HORN ONLY HORN/STROBE WALL LOW FREQUENCY OUTSIDE HORN/STROBE FOR WATER FLOW STROBE ONLY FLOW DETECTOR/SWITCH TAMPER DETECTOR 18/2 CABLE SLC LOOP 14/2 OR 16/2 AS REQUIRED, CABLE NAC LOOP EOL END-OF-LINE RESISTOR * ALL SYMBOLS SHOWN ABOVE MAY NOT APPEAR ON PLANS

ALL FIRE ALARM WIRING MUST BE IN STRICT COMPLIANCE WITH APPLICABLE SECTIONS OF THE NATIONAL ELECTRICAL CODE (ARTICLE 760) AND ALL APPLICABLE NFPA STANDARDS. INCLUDING CHAPTER 72.

- INSTALLATION MUST COMPLY WITH ALL APPLICABLE FEDERAL, STATE, OR LOCAL LAWS, REGULATIONS, CODES, AND SPECIFICATIONS. ALL INSTALLATIONS MUST BE APPROVED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
- WHERE CONDUCTORS ARE RUN IN CONDUIT USE ONLY APPROVED CABLE WITHIN RACEWAYS, PIPES, OR CONDUITS. ALL SHIELDS SHALL TERMINATE AT THE FIRE ALARM CONTROL PANEL (FACP) ONLY.
- TO AVOID CONTAMINATION AND DUST ACCUMULATION IN THE SMOKE DETECTORS, IT IS RECOMMENDED THAT THE SMOKE SMOKE DETECTORS NOT BE INSTALLED UNTIL AFTER CONSTRUCTION IS COMPLETED AND THE SUBJECT AREA HAS BEEN CLEANED. THE SUPPLIER IS NOT RESPONSIBLE FOR DUST ACCLIMATION IN SMOKE DETECTORS AND WILL NOT WARRANTEE DEVICES THAT HAVE NOT BEEN PROPERLY MAINTAINED. WHEN DETECTORS ARE INSTALLED, PROTECTIVE COVERS SHALL BE INSTALLED OVER EACH DETECTOR AND REMOVED BY AUTHORIZED SERVICE PERSONNEL.
- ALL FIRE ALARM SYSTEM WIRING SHALL BE CLEAR FROM SHORTS, OPENS, AND GROUNDS. A SMOKE DETECTOR MUST BE LOCATED WITHIN FIVE FEET HORIZONTALLY OF THE FIRE ALARM CONTROL PANEL.
- DO NOT LOCATE SMOKE DETECTORS WITHIN THREE FEET OF SUPPLY AIR VENTS. SMOKE DETECTORS SHALL BE LOCATED ON THE CEILING NOT LESS THAN 4 INCHES FROM SIDEWALL.
- SIGNALING CIRCUIT WIRE RUNS ARE CRITICAL. ANY INCREASE IN LENGTH OF WIRE MAY AFFECT CIRCUIT CONFIGURATIONS.
- MANUAL PULL STATIONS SHOULD BE 48 INCHES ABOVE THE FINISHED FLOOR IN ACCORDANCE WITH NFPA/ADA GUIDELINES. 0. HORNS WILL REMAIN ON UNTIL SILENCED AND STROBES WILL REMAIN UNTIL
- ALARM IS RESET. 11. SYSTEM IS AN ADDRESSABLE SUPERVISED PROTECTED PREMISES SYSTEM.
- 12. SEE APARTMENT PLANS FOR SMOKE/CO DETECTION WITHIN UNITS. 13. ALL DEVICES SHALL BE VISIBLE IN TYPE A - ACCESSIBLE UNITS.
- 14. CAPABILITY OF FUTURE ADDITIONS SHALL BE PROVIDED VIA BLANK BOXES IN BEDROOMS AS SHOWN AND WIRE SIZES WITH SPARE CAPACITY. ALSO REMOTE-WIRELESS UNITS CAN BE PROVIDED.
- 15. THIS SYSTEM COMPLIES WITH THE APPLICABLE SECTIONS OF ASME AND ANSI AS DICTATED BY THE DIVISION OF MISSOURI FIRE SAFETY, ELEVATOR SAFETY UNIT. ELEVATORS WILL COMPLY WITH ASME A17.1 2019 EDITION.





LEE'S SUMMIT, ARD RD.

DRAWING RELEASE LOG

• 03.15.2023 - PERMIT SUBMITTAL

 \triangle REVISIONS 1 04/02/2024 City Response

03.15.2023



JOB NO. **705921 DRAWN BY** Author **BUILDING 1 FIRE ALARM**

NFPA SYMBOLS LEGEND FCP FIRE ALARM CONTROL PANEL PULL STATION SMOKE DETECTOR WALL HORN ONLY HORN/STROBE WALL LOW FREQUENCY OUTSIDE HORN/STROBE FOR WATER FLOW STROBE ONLY FLOW DETECTOR/SWITCH TAMPER DETECTOR 18/2 CABLE SLC LOOP 14/2 OR 16/2 AS REQUIRED, CABLE NAC LOOP EOL END-OF-LINE RESISTOR

* ALL SYMBOLS SHOWN ABOVE MAY NOT APPEAR ON PLANS

- 1. ALL FIRE ALARM WIRING MUST BE IN STRICT COMPLIANCE WITH APPLICABLE SECTIONS OF THE NATIONAL ELECTRICAL CODE (ARTICLE 760) AND ALL APPLICABLE NFPA STANDARDS. INCLUDING CHAPTER 72.
- 2. INSTALLATION MUST COMPLY WITH ALL APPLICABLE FEDERAL, STATE, OR LOCAL LAWS, REGULATIONS, CODES, AND SPECIFICATIONS.
- 3. ALL INSTALLATIONS MUST BE APPROVED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
- 4. WHERE CONDUCTORS ARE RUN IN CONDUIT USE ONLY APPROVED CABLE WITHIN RACEWAYS, PIPES, OR CONDUITS. ALL SHIELDS SHALL TERMINATE AT THE FIRE ALARM CONTROL PANEL (FACP) ONLY.
- TO AVOID CONTAMINATION AND DUST ACCUMULATION IN THE SMOKE DETECTORS, IT IS RECOMMENDED THAT THE SMOKE SMOKE DETECTORS NOT BE INSTALLED UNTIL AFTER CONSTRUCTION IS COMPLETED AND THE SUBJECT AREA HAS BEEN CLEANED. THE SUPPLIER IS NOT RESPONSIBLE FOR DUST ACCLIMATION IN SMOKE DETECTORS AND WILL NOT WARRANTEE DEVICES THAT HAVE NOT BEEN PROPERLY MAINTAINED. WHEN DETECTORS ARE INSTALLED, PROTECTIVE COVERS SHALL BE INSTALLED OVER EACH DETECTOR AND REMOVED BY AUTHORIZED SERVICE PERSONNEL.
- 6. ALL FIRE ALARM SYSTEM WIRING SHALL BE CLEAR FROM SHORTS, OPENS, AND GROUNDS. A SMOKE DETECTOR MUST BE LOCATED WITHIN FIVE FEET HORIZONTALLY OF THE FIRE ALARM CONTROL PANEL.
- DO NOT LOCATE SMOKE DETECTORS WITHIN THREE FEET OF SUPPLY AIR VENTS. SMOKE DETECTORS SHALL BE LOCATED ON THE CEILING NOT LESS THAN 4 INCHES FROM SIDEWALL.
- SIGNALING CIRCUIT WIRE RUNS ARE CRITICAL. ANY INCREASE IN LENGTH OF WIRE MAY AFFECT CIRCUIT CONFIGURATIONS.
- MANUAL PULL STATIONS SHOULD BE 48 INCHES ABOVE THE FINISHED FLOOR IN ACCORDANCE WITH NFPA/ADA GUIDELINES. 10. HORNS WILL REMAIN ON UNTIL SILENCED AND STROBES WILL REMAIN UNTIL
- ALARM IS RESET. 11. SYSTEM IS AN ADDRESSABLE SUPERVISED PROTECTED PREMISES SYSTEM.
- 12. SEE APARTMENT PLANS FOR SMOKE/CO DETECTION WITHIN UNITS.
- 13. ALL DEVICES SHALL BE VISIBLE IN TYPE A ACCESSIBLE UNITS.
- 14. CAPABILITY OF FUTURE ADDITIONS SHALL BE PROVIDED VIA BLANK BOXES IN BEDROOMS AS SHOWN AND WIRE SIZES WITH SPARE CAPACITY. ALSO REMOTE-WIRELESS UNITS CAN BE PROVIDED.
- 15. THIS SYSTEM COMPLIES WITH THE APPLICABLE SECTIONS OF ASME AND ANSI AS DICTATED BY THE DIVISION OF MISSOURI FIRE SAFETY, ELEVATOR SAFETY UNIT. ELEVATORS WILL COMPLY WITH ASME A17.1 2019 EDITION.





LEE'S SUMMIT, 'ARD RD. TRIL DRAWING RELEASE LOG

• 03.15.2023 - PERMIT SUBMITTAL

03.15.2023

1 04/02/2024 City Response

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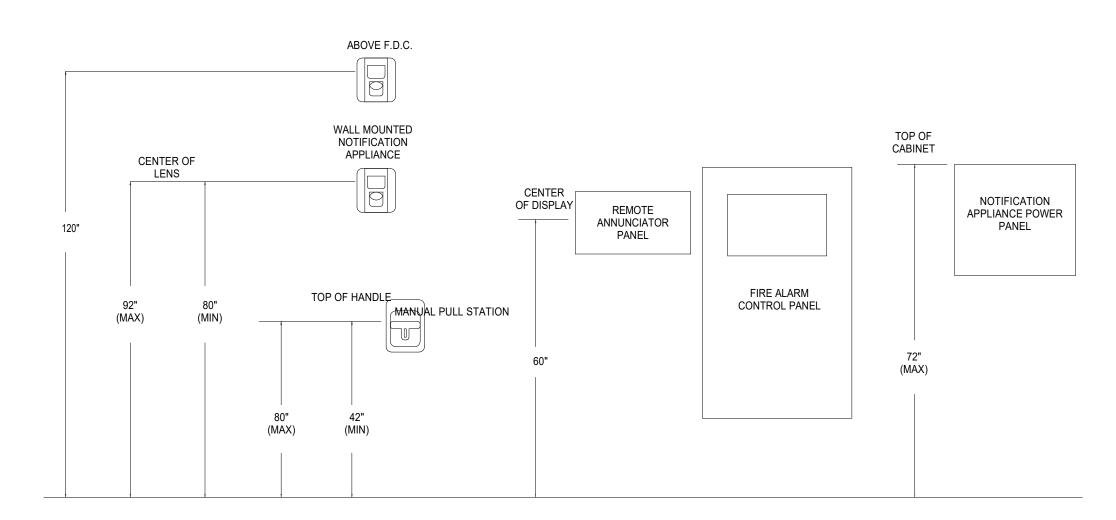


JOB NO. **705921 DRAWN BY** Author **BUILDING 2 FIRE ALARM**

NAC	CIRCUIT VO	LTAGE DROP		NAC CIRCUI	T VOLTA	GE DROP		NAC CIRCU	IT VOLTA	GE DROP		
Bldg 1 - NAC 1-1	CINCOTT VO			Bldg 1 - NAC 1-2	ii volini	or pico.		Bldg 1 - NAC 1-3		or piroi		
APPLIANCE	QTY	AMPS EACH	TOTAL AMPS	APPLIANCE	QTY	AMPS EACH	TOTAL AMPS		QTY	AMPS EACH	TOTAL AMP	
HORN/STROBE - 75	3	0.2	0.6	HORN/STROBE - 75		0.2	0	HORN/STROBE - 75	9	0.2	1.8	
STROBE - 15/75		0.077	0	STROBE - 15/75	3	0.077	0.231	STROBE - 15/75		0.077	0	
LF HORN	9	0.08	0.72	LF HORN	8	0.08	0.64	LF HORN		0.08	0	
LF HORN/STROBE		0.1	0	LF HORN/STROBE	5	0.1	0.5	LF HORN/STROBE		0.1	0	
TOTAL			1.32	TOTAL			1.371	TOTAL			1.8	
LOOP LENGTH	500	WIRE SIZE	#14	LOOP LENGTH	450	WIRE SIZE	#14	LOOP LENGTH	470	WIRE SIZE	#14	
NOM. VOLTS	LOSS	FINAL VOLTS	MIN. VOLTS	NOM. VOLTS	LOSS	FINAL VOLTS	MIN. VOLTS	NOM. VOLTS	LOSS	FINAL VOLTS	MIN. VOLTS	
24	3.37	20.63	16	24	3.15	20.85	16	24	4.31	19.69	16	
NAC	CIRCUIT VO	LTAGE DROP		NAC CIRCUI	T VOLTA	GE DROP		NAC CIRCU	GE DROP			
Bldg 1 - NAC 2-1 APPLIANCE	QTY	AMPS EACH	TOTAL AMPS	Bldg 1 - NAC 2-2 APPLIANCE	QTY	AMPS EACH	TOTAL AMPS	Bldg 1 - NAC 2-3	QTY	AMPS EACH	TOTAL AMP	
											TOTALA	
HORN/STROBE - 75	4	0.2	0.8	HORN/STROBE - 75	11	0.2	2.2	HORN/STROBE - 75	5	0.2	1	
STROBE - 15/75		0.077	0	STROBE - 15/75	9	0.077	0.693	STROBE - 15/75	9	0.077	0.693	
LF HORN	8	0.08	0.64	LF HORN		0.08	0	LF HORN		0.08	0	
LF HORN/STROBE		0.1	0	LF HORN/STROBE		0.1	0	LF HORN/STROBE		0.1	0	
TOTAL			1.44	TOTAL			2.893	TOTAL			1.693	
LOOP LENGTH	400	WIRE SIZE	#14	LOOP LENGTH	490	WIRE SIZE	#14	LOOP LENGTH	320	WIRE SIZE	#14	
NOM. VOLTS	LOSS	FINAL VOLTS		NOM. VOLTS	LOSS	FINAL VOLTS		NOM. VOLTS	LOSS	FINAL VOLTS	MIN. VOLTS	
24	2.94	21.06	16	24	7.23	16.77	16	24	2.76	21.24	16	
	CIRCUIT VO	LTAGE DROP		NAC CIRCUI	T VOLTA	GE DROP		NAC CIRCU	IT VOLTA	GE DROP		
Bldg 1 - NAC 2-4 APPLIANCE	QTY	AMPS EACH	TOTAL AMPS	Bldg 1 - NAC 3-1, 4-1, 6-1 APPLIANCE	QTY	AMPS EACH	TOTAL AMPS	Bldg 1 - NAC 3-2, 4-2, 6-2 APPLIANCE	QTY	AMPS EACH	TOTAL AMP	
HORN/STROBE - 75	5	0.2	1	HORN/STROBE - 75	3	0.2	0.6	HORN/STROBE - 75	1	0.2	0.2	
STROBE - 15/75		0.077	0	STROBE - 15/75		0.077	0	STROBE - 15/75		0.077	0	
LF HORN	13	0.08	1.04	LF HORN	11	0.08	0.88	LF HORN	10	0.08	0.8	
LF HORN/STROBE		0.1	0	LF HORN/STROBE		0.1	0	LF HORN/STROBE		0.1	0	
TOTAL		,	2.04	TOTAL			1.48	TOTAL			1	
LOOP LENGTH	650	WIRE SIZE	#14	LOOP LENGTH	580	WIRE SIZE	#14	LOOP LENGTH	450	WIRE SIZE	#14	
NOM. VOLTS	LOSS	FINAL VOLTS	MIN. VOLTS	NOM. VOLTS	LOSS	FINAL VOLTS	MIN. VOLTS	NOM. VOLTS	LOSS	FINAL VOLTS	MIN. VOLTS	
24	6.76	17.24	16	24	4.38	19.62	16	24	2.30	21.71	16	
NAC	CIRCUIT VO	LTAGE DROP		NAC CIRCUI	T VOLTA	GE DROP		NAC CIRCUIT VOLTAGE DROP				
Bldg 1 - NAC 3-3, 4-3, APPLIANCE	6-3 QTY	AMPS EACH	TOTAL AMPS	Bldg 1 - NAC 5-1, 5-3 APPLIANCE	QTY	AMPS EACH	TOTAL AMPS	Bldg 1 - NAC 5-2, 5-4 APPLIANCE	QTY	AMPS EACH	TOTAL AMP	
HORN/STROBE - 75	6	0.2	1.2	HORN/STROBE - 75	4	0.2	0.8	HORN/STROBE - 75	3	0.2	0.6	
STROBE - 15/75		0.077	0	STROBE - 15/75		0.077	0	STROBE - 15/75		0.077	0	
LF HORN	11	0.08	0.88	LF HORN	11	0.08	0.88	LF HORN	6	0.08	0.48	
LF HORN/STROBE		0.1	0	LF HORN/STROBE		0.1	0	LF HORN/STROBE		0.1	0	
TOTAL		T	2.08	TOTAL		T	1.68	TOTAL		T	1.08	
LOOP LENGTH	700	WIRE SIZE	#14	LOOP LENGTH	550	WIRE SIZE	#14	LOOP LENGTH	420	WIRE SIZE	#14	
NOM. VOLTS	LOSS 7.43	FINAL VOLTS	MIN. VOLTS	NOM. VOLTS	LOSS 4.71	FINAL VOLTS	MIN. VOLTS	NOM. VOLTS	LOSS 2.31	FINAL VOLTS 21.69	MIN. VOLTS	
			10				10				10	
Bldg 2 - NAC 1-1	CIRCUIT VO	LTAGE DROP		Bldg 2 - NAC 1-2	II VULIA	GE DKOP		Bldg 2 - NAC 1-3	II VOLIA	GE DROP		
APPLIANCE	QTY	AMPS EACH	TOTAL AMPS		QTY	AMPS EACH	TOTAL AMPS		QTY	AMPS EACH	TOTAL AMP	
HORN/STROBE - 75	4	0.2	0.8	HORN/STROBE - 75	7	0.2	1.4	HORN/STROBE - 75	5	0.2	1	
STROBE - 15/75	<u> </u>	0.077	0.8	STROBE - 15/75	2	0.077	0.154	STROBE - 15/75	3	0.077	0.231	
LF HORN		0.08	0	LF HORN	7	0.08	0.154	LF HORN	4	0.077	0.32	
LF HORN/STROBE		0.1	0	LF HORN/STROBE	3	0.1	0.3	LF HORN/STROBE	5	0.1	0.52	
TOTAL		-	0.8	TOTAL	1 -	<u> </u>	2.414	TOTAL		<u> </u>	2.051	
LOOP LENGTH	200	WIRE SIZE	#14	LOOP LENGTH	640	WIRE SIZE	#14	LOOP LENGTH	700	WIRE SIZE	#14	
NOM. VOLTS	LOSS		MIN. VOLTS	NOM. VOLTS	LOSS		MIN. VOLTS	NOM. VOLTS	LOSS	FINAL VOLTS		
24	0.82	23.18	16	24	7.88	16.12	16	24	7.32	16.68	16	
	-1		1	L	1				1		<u> </u>	

NAC	CIRCUIT VO	LTAGE DROP		NAC CIRCU	T VOLTA	GE DROP		NAC CIRCUIT VOLTAGE DROP						
Bldg 2 - NAC 1-4, 2-6	, 3-2			Bldg 2 - NAC 2-1, 2-3, 3-3				Bldg 2 - NAC 2-2, 3-1, 3-4						
APPLIANCE	QTY	AMPS EACH	TOTAL AMPS	APPLIANCE	QTY	AMPS EACH	TOTAL AMPS	APPLIANCE	QTY	AMPS EACH	TOTAL AMP			
HORN/STROBE - 75	5	0.2	1	HORN/STROBE - 75	5	0.2	1	HORN/STROBE - 75	2	0.2	0.4			
STROBE - 15/75		0.077	0	STROBE - 15/75		0.077	0	STROBE - 15/75		0.077	0			
LF HORN	11	0.08	0.88	LF HORN	12	0.08	0.96	LF HORN	12	0.08	0.96			
LF HORN/STROBE		0.1	0	LF HORN/STROBE		0.1	0	LF HORN/STROBE		0.1	0			
TOTAL		•	1.88	TOTAL	•		1.96	TOTAL	•		1.36			
LOOP LENGTH	550	WIRE SIZE	#14	LOOP LENGTH	560	WIRE SIZE	#14	LOOP LENGTH	620	WIRE SIZE	#14			
NOM. VOLTS	LOSS	FINAL VOLTS	MIN. VOLTS	NOM. VOLTS	LOSS	FINAL VOLTS	MIN. VOLTS	NOM. VOLTS	LOSS	FINAL VOLTS	MIN. VOLTS			
24	5.27	18.73	16	24	5.60	18.40	16	24	4.30	19.70	16			

NAC	NAC CIRCUIT VOLTAGE DROP								
Bldg 2 - NAC 2-3, 2-5,	3-5								
APPLIANCE	QTY	AMPS EACH	TOTAL AMPS						
HORN/STROBE - 75	7	0.2	1.4						
STROBE - 15/75		0.077	0						
LF HORN	9	0.08	0.72						
LF HORN/STROBE		0.1	0						
TOTAL			2.12						
LOOP LENGTH	420	WIRE SIZE	#14						
NOM. VOLTS	LOSS	FINAL VOLTS	MIN. VOLTS						
24	4.54	19.46	16						



WALL MOUNTED EQUIPMENT FIRE ALARM INSTALLATION HEIGHTS/DETAILS

NO SCALE

Jobsite Information: Summit Square 3 Bldg 1

FCPS-24FS6 / 8 Battery Calculation Entries only to be made in the Yellow cell locations

Device Type	Number of Devices		Current (Amps)		Total Current (Amps)
Main PC Board	1	Χ	0.065	=	0.065
Power Supervision Relays		Χ	0.025	=	0
Auxiliary Current Draw		Х		=	0
from TB4 Terminals 9 & 10					
			STANDBY		•
			LOAD	=	0.065

	Number of		Current		Total Currer
Device Type	Devices		(Amps)		(Amps)
Main PC Board without AC	1	X	0.145	=	0.145
Power Supervision Relays		X	0.025	=	0
Auxiliary Current Draw		X		=	0
from TB4 Terminals 9 & 10					
NAC / Output # 1	21	X	0.08	=	1.68
Strobes					
NAC / Output # 2	85	Х	0.08	=	6.8
Horn/Strobes					
NAC / Output # 3	165	Х	0.1	=	16.5
LF Horns					
NAC / Output # 4		Х		=	0
Spare			ALARM		
			LOAD	=	25.125

Standby Load			Required S	Standby	Time			
Current (Amps)			(Typically 24 or 60 Hours)					
, ,	0.065	X	24	=	1.56	AH		
Alarm Load			Required A	larm Ti	me			
Current (Amps)			(Typically !	(Typically 5 or 10 Minutes)				
	25.125	X	10	=	4.19	AH		

Multiply by the Derating Factor X 1.2

Total Ampere Hours Required = 7

* Derating Factor required to compensate for the non-linear discharge characteristic of a battery.

Jobsite Information: Summit Square 3 Bldg 2

FCPS-24FS6 / 8 Battery Calculation Entries only to be made in the Yellow cell locations

Device Type	Number of Devices		Current (Amps)		Total Current (Amps)
Main PC Board	1	Χ	0.065	=	0.065
Power Supervision Relays		Х	0.025	=	0
Auxiliary Current Draw		Х		=	0
from TB4 Terminals 9 & 10					
			STANDBY		
			LOAD	=	0.065

Device Type	Number of Devices		Current (Amps)		Total Current (Amps)
Main PC Board without AC	1	X	0.145	=	0.145
Power Supervision Relays		X	0.025	=	0
Auxiliary Current Draw		Χ		=	0
from TB4 Terminals 9 & 10					
NAC / Output # 1	5	Х	0.08	=	0.4
Strobes					
NAC / Output # 2	48	Х	0.08	=	3.84
Horn/Strobes					
NAC / Output # 3	143	Х	0.1	=	14.3
LF Horns					
NAC / Output # 4		Х		=	0

Standby Load				Standby ⁻				
Current (Amps)			(Typically 24 or 60 Hours)					
	0.065	Х	24	=	1.56	AH		
Alarm Load				l Alarm Tin				
Current (Amps)			(Typicall)	y 5 or 10 N	Minutes)			
	18.685	X	10	=	3.11	ΑH		
			·					
	Sub Tot	al Standb	y / Alarm A	mp Hours	4.67	AH		
	Multip	oly by the	Derating F	actor X	1.2	Άŀ		
	Total An	npere Ho	ours Requ	6				

* Derating Factor required to compensate for the non-linear discharge characteristic of a battery.

FIRE ALARM SEQUENCE OF OPERATION MATRIX

	SYSTEM OUTPUTS	audible alarms activation	actuate strobes	transmit alarm to remote	अधिमित्री alarm signal	display supervisory signal	display trouble signal	transmit supervisory signal	transmit trouble signal	record event at FACP	activate outside flow bell	release magnetic door holders	recall elevator to lowest level	recall elevator to alternate	level
SYSTEM INPUTS		Α	В	С	D	Е	F	G	Н	1	J	K	L	М	
manual pull station		Х	Χ	Χ	Χ					Χ		Χ	Χ		1
area smoke detector		Х	Χ	Χ	Χ					Χ		Χ	Χ	Χ	2
fire sprinkler system water flow		Х	Χ	Χ	Χ					Χ	Χ	Χ	Χ		3
fire spinkler system tamper						Χ		Χ		Χ					4
fire alarm AC power failure							Χ		Χ	Χ					5
fire alarm low battery							Χ		Χ	Χ					6
fire alarm open circuit							Χ		Χ	Χ					7
fire alarm ground fault							Χ		Χ	Χ					8
notification appliance circuit fault							Χ		Χ	Χ					9
fire alarm panel clear										Χ					10
		1 - 1	_	_	_	_	_	_		_					

A B C D E F G H I J K L M

	NFPA SYMBOLS LEGEND
FCP	FIRE ALARM CONTROL PANEL
۰	PULL STATION
0	SMOKE DETECTOR
	WALL HORN ONLY
₩	HORN/STROBE WALL LOW FREQUENCY
V ⊠wp	OUTSIDE HORN/STROBE FOR WATER FLOW
\times	STROBE ONLY
5 - \$-3	FLOW DETECTOR/SWITCH
\mathbb{Q}_{ζ}	TAMPER DETECTOR
	18/2 CABLE SLC LOOP
	14/2 OR 16/2 AS REQUIRED, CABLE NAC LOOP
EOL	END-OF-LINE RESISTOR
* ALL S	SYMBOLS SHOWN ABOVE MAY NOT APPEAR ON PLANS

- INSTALLATION MUST COMPLY WITH ALL APPLICABLE FEDERAL, STATE, OR
- THE FIRE ALARM CONTROL PANEL (FACP) ONLY. TO AVOID CONTAMINATION AND DUST ACCUMULATION IN THE SMOKE
- ALL FIRE ALARM SYSTEM WIRING SHALL BE CLEAR FROM SHORTS, OPENS, AND GROUNDS. A SMOKE DETECTOR MUST BE LOCATED WITHIN FIVE FEET
- DO NOT LOCATE SMOKE DETECTORS WITHIN THREE FEET OF SUPPLY AIR VENTS. SMOKE DETECTORS SHALL BE LOCATED ON THE CEILING NOT LESS
- SIGNALING CIRCUIT WIRE RUNS ARE CRITICAL. ANY INCREASE IN LENGTH OF
- MANUAL PULL STATIONS SHOULD BE 48 INCHES ABOVE THE FINISHED FLOOR
- 10. HORNS WILL REMAIN ON UNTIL SILENCED AND STROBES WILL REMAIN UNTIL ALARM IS RESET.
- 12. SEE APARTMENT PLANS FOR SMOKE/CO DETECTION WITHIN UNITS.
- 13. ALL DEVICES SHALL BE VISIBLE IN TYPE A ACCESSIBLE UNITS.
- REMOTE-WIRELESS UNITS CAN BE PROVIDED. THIS SYSTEM COMPLIES WITH THE APPLICABLE SECTIONS OF ASME AND
- ANSI AS DICTATED BY THE DIVISION OF MISSOURI FIRE SAFETY, ELEVATOR SAFETY UNIT. ELEVATORS WILL COMPLY WITH ASME A17.1 2019 EDITION.

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- LOCAL LAWS, REGULATIONS, CODES, AND SPECIFICATIONS.
- ALL INSTALLATIONS MUST BE APPROVED BY THE LOCAL AUTHORITY HAVING
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- DETECTORS, IT IS RECOMMENDED THAT THE SMOKE SMOKE DETECTORS NOT BE INSTALLED UNTIL AFTER CONSTRUCTION IS COMPLETED AND THE SUBJECT AREA HAS BEEN CLEANED. THE SUPPLIER IS NOT RESPONSIBLE FOR DUST ACCLIMATION IN SMOKE DETECTORS AND WILL NOT WARRANTEE DEVICES THAT HAVE NOT BEEN PROPERLY MAINTAINED. WHEN DETECTORS ARE INSTALLED, PROTECTIVE COVERS SHALL BE INSTALLED OVER EACH DETECTOR AND REMOVED BY AUTHORIZED SERVICE PERSONNEL.
- HORIZONTALLY OF THE FIRE ALARM CONTROL PANEL.
- THAN 4 INCHES FROM SIDEWALL.
- WIRE MAY AFFECT CIRCUIT CONFIGURATIONS.
- IN ACCORDANCE WITH NFPA/ADA GUIDELINES.
- 11. SYSTEM IS AN ADDRESSABLE SUPERVISED PROTECTED PREMISES SYSTEM.
- 14. CAPABILITY OF FUTURE ADDITIONS SHALL BE PROVIDED VIA BLANK BOXES IN BEDROOMS AS SHOWN AND WIRE SIZES WITH SPARE CAPACITY. ALSO

JOB NO. **705921 DRAWN BY Author**

03.15.2023 SHEET NAME CONSULTING ENGINEERS FIRE ALARM 3639 SW Summerfield Drive, Suite A Topeka, Kansas 6614-3974 8625 College Boulevard, Suite 102 Overland Park, Kansas 66210 **DETAILS/SCHEDULES** Telephone: (785) 233-3232 Email: Isapa@Isapa.com LSA PROJECT NO. 2204061

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