

GENERAL ELECTRICAL NOTES

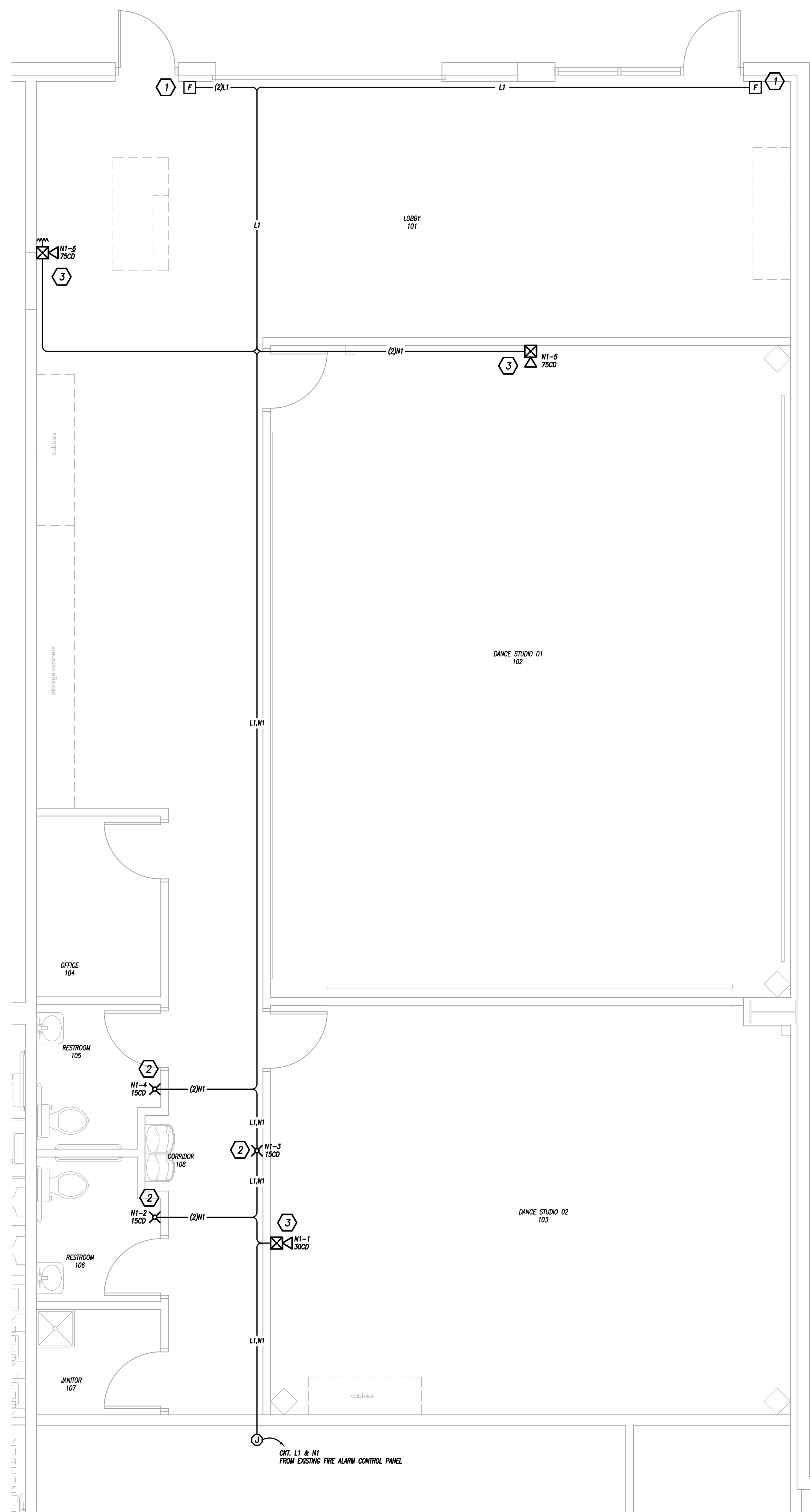
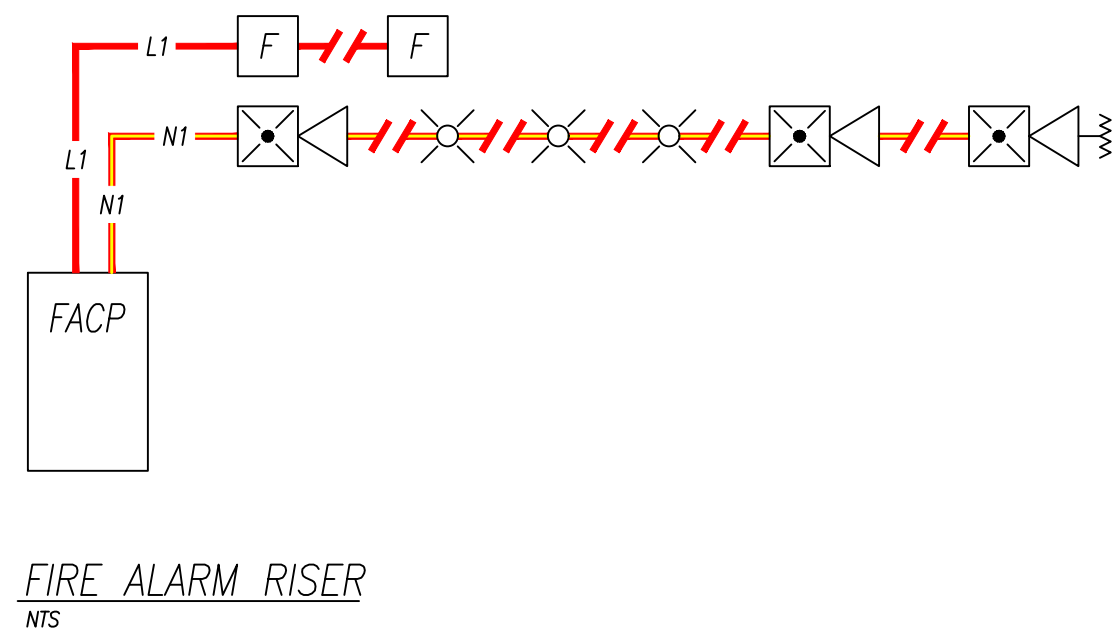
- FIRE ALARM SYSTEM SHALL BE INSTALLED AND TESTED IN STRICT ACCORDANCE WITH NFPA 72, NATIONAL FIRE ALARM CODE, AS WELL AS STATE AND LOCAL BUILDING CODES AND STANDARDS, INCLUDING, BUT NOT LIMITED TO, (IBC) INTERNATIONAL BUILDING CODE, 2012 EDITION.
- FIRE ALARM CONDUCTORS AND CABLES SHALL BE INSTALLED IN STRICT ACCORDANCE WITH NFPA 70, NATIONAL ELECTRICAL CODE AND SPECIFICALLY WITH ARTICLES 760, 770 AND 800, WHERE APPLICABLE. OPTICAL FIBER CABLES SHALL BE PROTECTED AGAINST MECHANICAL INJURY IN ACCORDANCE WITH ARTICLE 760.
- FIRE ALARM CONDUCTORS AND CABLES SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. CONDUCTORS AND CABLES SHALL BE SUPPORTED BY THE BUILDING STRUCTURE IN SUCH A MANNER THAT THE CABLE WILL NOT BE DAMAGED BY NORMAL BUILDING USE.
- THE INSTALLING ELECTRICAL CONTRACTOR MUST PROVIDE THE FIRE ALARM CONTRACTOR (KELLER FIRE & SAFETY) WITH ACCURATE MARKED UP DRAWINGS SHOWING ALL JUNCTION BOXES, TERMINAL CABINETS, DEVICE LOCATIONS, WIRE ROUTING, ETC. FOR THE USE IN MAKING OF "RECORD DRAWINGS". FINAL PAYMENT WILL NOT BE AUTHORIZED UNTIL THE RECORD DOCUMENTS HAVE BEEN RECEIVED AND APPROVED.
- CONDUIT ROUTING AND CONDUIT SIZE SHALL BE DETERMINED BY THE CONTRACTOR, IN CONJUNCTION WITH NFPA 70 (NEC), AND INDICATED ON THE RECORD DRAWINGS. CONDUIT FILL SHALL NOT EXCEED 40%.
- PRIMARY POWER SOURCE (120VAC) TO FACP AND POWER SUPPLIES MUST BE ON A DEDICATED BRANCH CIRCUIT FROM THE EMERGENCY GENERATOR (IF APPLICABLE), WITH DISCONNECTING MEANS MARKED "FIRE ALARM CONTROL CIRCUIT". THE LOCATION OF THE DISCONNECT MUST BE IDENTIFIED AT THE FACP AND ALL POWER SUPPLIES. ALL FIRE ALARM CIRCUIT BREAKERS MUST BE CLEARLY MARKED AND MECHANICALLY SECURED TO PREVENT ANY UNAUTHORIZED TAMPERING.
- DEVICE POLARITY MUST BE OBSERVED ON ALL DC CIRCUITS (SLC), IDC, NAC, AND AUXILIARY POWER.
- ALL INITIATING AND NOTIFICATION CIRCUIT WIRING MUST BE SUPERVISED.
- ALL WIRING, INCLUDING SHIELDS, MUST BE DRY AND FREE OF SHORTS AND GROUNDS.
- INITIATING DEVICES SHALL BE SUPPORTED INDEPENDENTLY OF THEIR ATTACHMENT TO FIRE ALARM CIRCUIT CONDUCTORS.
- FIRE ALARM CIRCUITS SHALL BE IDENTIFIED AT TERMINAL AND JUNCTION LOCATIONS, IN A MANNER THAT WILL PREVENT UNINTENTIONAL INTERFERENCE WITH THE SIGNALING LINE CIRCUIT (SLC) DURING TESTING AND SERVICING (NEC ARTICLE 760-10).
- SMOKE DETECTORS SHALL BE MOUNTED IN ACCORDANCE WITH NFPA 72. DETECTORS SHALL NOT BE LOCATED IN A DIRECT AIR FLOW NOR CLOSER THAN 3 FEET (1 METER) FROM AN AIR SUPPLY DIFFUSER OR RETURN AIR OPENING. FURTHER, DETECTORS SHALL NOT BE INSTALLED WITHIN 1 FOOT OF LIGHT FIXTURES.
- DETECTORS SHALL NOT BE INSTALLED UNTIL AFTER THE CONSTRUCTION CLEANUP OF ALL TRADES IS COMPLETE AND FINAL.
- ALL FIRE ALARM DEVICES MUST BE INSTALLED IN A PROPER BACK BOX. NO DEVICE SHALL BE INSTALLED WITHOUT A BACK BOX.
- POWER-LIMITED FIRE ALARM CIRCUIT CONDUCTORS AND CABLES (NEC ARTICLE 760-71) SHALL BE INSTALLED AS FOLLOWS:
 - IN RACEWAY OR EXPOSED ON THE SURFACE OF CEILING AND SIDE WALLS OR "TISHED" IN CONCEALED SPACES. CABLE SPLICES OR TERMINATIONS SHALL BE MADE IN LISTED FITTINGS, BOXES ENCLOSURES, FIRE ALARM DEVICES, OR UTILIZATION EQUIPMENT. WHERE INSTALLED EXPOSED, CABLES SHALL BE ADEQUATELY SUPPORTED AND INSTALLED IN SUCH A WAY THAT MAXIMUM PROTECTION AGAINST PHYSICAL DAMAGE IS AFFORDED BY BUILDING CONSTRUCTION SUCH AS BASEBOARDS, DOOR FRAMES, LEDGES, ETC. WHERE LOCATED WITHIN 7 FEET (2.13 METERS) OF THE FLOOR, CABLES SHALL BE SECURELY FASTENED IN AN APPROVED MANNER AT INTERVALS OF NOT MORE THAN 18 INCHES.
 - IN METAL RACEWAYS OR RIGID NONMETALLIC CONDUIT WHERE PASSING THROUGH A FLOOR OR WALL TO A HEIGHT OF 7 FEET (2.13 METERS) ABOVE THE FLOOR, UNLESS ADEQUATE PROTECTION CAN BE AFFORDED BY BUILDING CONSTRUCTION SUCH AS DETAILED IN (A) ABOVE, OR UNLESS AN EQUIVALENT SOLID GUARD IS PROVIDED.
 - IN RIGID METAL CONDUIT, RIGID NONMETALLIC CONDUIT, INTERMEDIATE METAL CONDUIT, OR ELECTRICAL METALLIC TUBING WHERE INSTALLED IN HOSTWAYS. (EXCEPTION: AS PROVIDED IN NEC SECTION 620-71 FOR ELEVATORS AND SIMILAR EQUIPMENT)
- ALL DEVICES SHALL BE LABELED WITH THEIR ADDRESS OR CIRCUIT NUMBER.
- POWER-LIMITED CIRCUIT CABLES AND CONDUCTORS SHALL NOT BE PLACED IN ANY CABLE, CABLE TRAY, COMPARTMENT, ENCLOSURE, OUTLET BOX, RACEWAY, OR SIMILAR FITTING WITH CONDUCTORS OF ELECTRIC LIGHT, POWER, CLASS 1 NONPOWER-LIMITED FIRE ALARM CIRCUIT CONDUCTORS, OR MEDIUM POWER NETWORK-POWER BOARD BAND COMMUNICATIONS CIRCUITS (NEC ARTICLE 760-54).
- POWER-LIMITED CIRCUIT CONDUCTORS SHALL NOT BE STRAPPED, TAPED OR ATTACHED BY ANY MEANS TO THE EXTERIOR OF ANY CONDUIT OR OTHER RACEWAY AS A MEANS OF SUPPORT.
- INITIATING DEVICE CIRCUITS (IDC) AND NOTIFICATION APPLIANCE CIRCUITS (NAC), ARE TWO WIRE CLASS "B". NO "T-TAPPING" IS ALLOWED ON ANY OF THESE CIRCUITS.
- AUXILIARY POWER CIRCUITS ARE TWO WIRE CIRCUITS THAT CAN BE T-TAPPED AS REQUIRED.
- SIGNALING LINE CIRCUITS (SLC) DESIGNATED AS CLASS "B" ARE TWO WIRE DATA COMMUNICATIONS CIRCUITS. T-TAPPING IS ALLOWED ONLY AT JUNCTION BOXES AND SLC DEVICES, BUT SHALL BE KEPT TO A MINIMUM.
- SIGNALING LINE CIRCUITS (SLC) DESIGNATED AS CLASS "A" ARE TWO WIRE DATA COMMUNICATIONS CIRCUITS. NO T-TAPPING IS PERMITTED. THE OUTGOING AND RETURN CONDUCTORS OF A CLASS "A" CIRCUIT, EXITING FROM AND RETURNING TO THE CONTROL UNIT, RESPECTIVELY, MUST BE ROUTED SEPARATELY. THE OUTGOING AND RETURN (REDUNDANT) CIRCUIT CONDUCTORS SHALL NOT BE RUN IN THE SAME CABLE ASSEMBLY, ENCLOSURE, OR RACEWAY. THE OUTGOING AND RETURN CIRCUIT CONDUCTORS SHALL BE PERMITTED TO BE RUN IN THE SAME CABLE ASSEMBLY, ENCLOSURE, OR RACEWAY ONLY UNDER THE FOLLOWING CONDITIONS:
 - FOR A DISTANCE OF 10 FEET (3 METERS) WHERE THE OUTGOING AND RETURN CONDUCTORS ENTER OR EXIT THE INITIATING DEVICE, NOTIFICATION APPLIANCE, OR CONTROL UNIT ENCLOSURES.
 - SINGLE CONDUIT/RACEWAY DROPS (UNLIMITED LENGTH) TO INDIVIDUAL DEVICES OR APPLIANCES.
 - SINGLE CONDUIT/RACEWAY DROPS TO MULTIPLE DEVICES OR APPLIANCES INSTALLED WITH A SINGLE ROOM NOT EXCEEDING 1000 FEET (92.9 METERS) IN AREA.
- OPENINGS AROUND ELECTRICAL PENETRATIONS THROUGH FIRE-RESISTANT/RATED WALLS, PARTITIONS, FLOORS OR CEILINGS SHALL BE FIRE STOPPED USING APPROVED METHODS TO MAINTAIN THE FIRE RESISTANCE RATING.

GENERAL NOTES

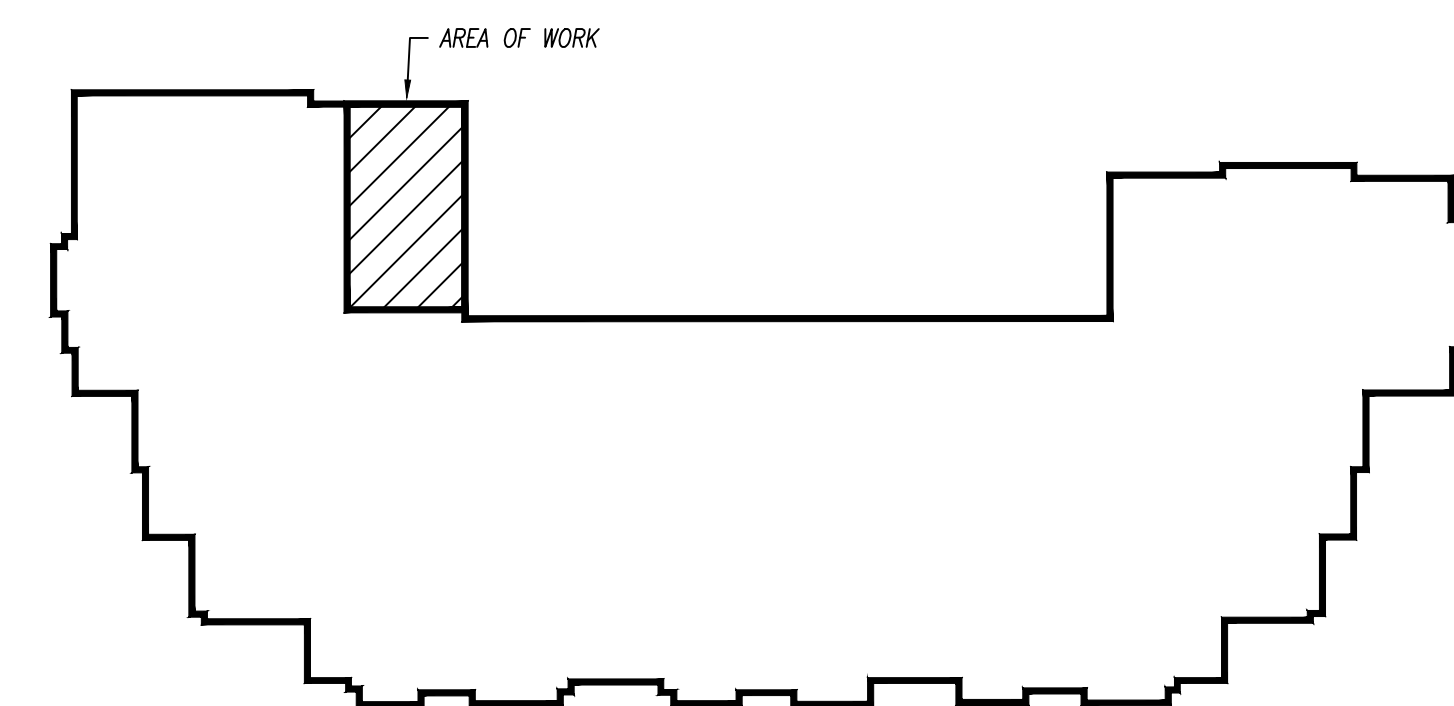
- DRAWINGS ARE SCHEMATIC BY NATURE AND MAY NOT REFLECT EXACT FIELD LOCATIONS. UPON COMPLETION OF INSTALLATION "AS-BUILT" DRAWINGS ARE REQUESTED FOR FINAL RECORD DOCUMENTATION.
- EXISTING FIRE ALARM SYSTEM SHALL REMAIN. CONNECT NEW FIRE ALARM EQUIPMENT TO EXISTING SYSTEM AS SHOWN FOR PROPER FUNCTION.

KEYED NOTES

- NEW MANUAL PULL STATION. CONNECT TO EXISTING FIRE ALARM CONTROL PANEL INITIATING DEVICE CIRCUIT (CIRCUIT TYPE L1) FOR PROPER FUNCTION.
- NEW WALL MOUNT STROBE. CONNECT TO EXISTING FIRE ALARM CONTROL PANEL NOTIFICATION APPLIANCE CIRCUIT (CIRCUIT TYPE N1) FOR PROPER FUNCTION.
- NEW WALL MOUNT HORN/STROBE. CONNECT TO EXISTING FIRE ALARM CONTROL PANEL NOTIFICATION APPLIANCE CIRCUIT (CIRCUIT TYPE N1) FOR PROPER FUNCTION.



FIRE ALARM ELECTRICAL PLAN
1/4"=1'-0"



EQUIPMENT SCHEDULE					
SYMBOL	QTY	PART NUMBER	MFG	BACKBOX	DESCRIPTION
[FACB]	1	SK-5208	SILENTKNIGHT	SUPPLIED	72" A.F.F. TO TOP OF CABINET CONVENTIONAL FIRE ALARM CONTROL PANEL, EXISTING
[1]	2	N/A	N/A	N/A	12V 7AH BATTERY, EXISTING
[7]	2	BC-12L	FIRELITE	4" SQUARE, 2.5"D	44" A.F.F. TO BOTTOM OF BOX MANUAL PULL STATION
[X]	3	SRL	SYSTEMSENSOR	4" SQUARE, 2.5"D	84" A.F.F. TO BOTTOM OF BOX WALL MOUNT STROBE, RED
[X-1]	3	FRL	SYSTEMSENSOR	4" SQUARE, 2.5"D	84" A.F.F. TO BOTTOM OF BOX WALL MOUNT HORN/STROBE, RED

CIRCUIT SCHEDULE			
CIRCUIT	CABLE/WIRE DESCRIPTION	FUNCTION	REMARKS
L1	16AWG 2-CONDUCTOR P/PLP, WINNY CITY WIRE #16X360 (OR EQUIV.)	SIGNALING LINE CIRCUIT	INITIATING DEVICES (RED JACKET, RED STRIPE)
N1	14AWG 2-CONDUCTOR P/PLP, WINNY CITY WIRE #14X763 (OR EQUIV.)	NOTIFICATION CIRCUIT	VISUAL DEVICES (RED JACKET, YELLOW STRIPE)

SILENT KNIGHT
Version 02.20.09

Panel ID: SK-5208 Model: SK-5208 Fire Alarm Control Panel Max NAC Current: 3.0 Amps
Location: Volts: 24 VDC Max Panel Current: 6.0 Amps

Ckt.#	Circuit Name	Qty	Current Draw	Wire AWG & Type	Ohms Per 1000 Ft	Length (ft)	Actual Ohms	Volts @ EOL	% Drop
SK-5208	SK-5208 Main Control	1	0.140	0.550					
SK-5217	SK-5217 Zone Expdr	0	0.000	0.000					
SK-5238	SK-5238 LCU Remote	0	0.000	0.000					
SK-5280	SK-5280 Display Mod	0	0.000	0.000					
SK-5290	SK-5290 Dr Con Mod	0	0.000	0.000					
SK-7181	SK-7181 Zn Crwr	0	0.000	0.000					
IDC-1	Initiating Device Ckt 1	0	0.000	NA**					
IDC-2	Initiating Device Ckt 2	0	0.000	NA**					
IDC-3	Initiating Device Ckt 3	0	0.000	NA**					
IDC-4	Initiating Device Ckt 4	0	0.000	NA**					
IDC-5	Initiating Device Ckt 5	0	0.000	NA**					
IDC-6	Initiating Device Ckt 6	0	0.000	NA**					
IDC-7	Initiating Device Ckt 7	0	0.000	NA**					
IDC-8	Initiating Device Ckt 8	0	0.000	NA**					
IDC-9	Initiating Device Ckt 9	0	0.000	NA**					
IDC-10	Initiating Device Ckt 10	0	0.000	NA**					
IDC-11	Inactive, Add SK-5217	0	0.000	NA**					
IDC-12	Inactive, Add SK-5217	0	0.000	NA**					
IDC-13	Inactive, Add SK-5217	0	0.000	NA**					
IDC-14	Inactive, Add SK-5217	0	0.000	NA**					
IDC-15	Inactive, Add SK-5217	0	0.000	NA**					
IDC-16	Inactive, Add SK-5217	0	0.000	NA**					
IDC-17	Inactive, Add SK-5217	0	0.000	NA**					
IDC-18	Inactive, Add SK-5217	0	0.000	NA**					
IDC-19	Inactive, Add SK-5217	0	0.000	NA**					
IDC-20	Inactive, Add SK-5217	0	0.000	NA**					
IDC-21	Inactive, Add SK-5217	0	0.000	NA**					
IDC-22	Inactive, Add SK-5217	0	0.000	NA**					
IDC-23	Inactive, Add SK-5217	0	0.000	NA**					
IDC-24	Inactive, Add SK-5217	0	0.000	NA**					
IDC-25	Inactive, Add SK-5217	0	0.000	NA**					
IDC-26	Inactive, Add SK-5217	0	0.000	NA**					
IDC-27	Inactive, Add SK-5217	0	0.000	NA**					
IDC-28	Inactive, Add SK-5217	0	0.000	NA**					
IDC-29	Inactive, Add SK-5217	0	0.000	NA**					
IDC-30	Inactive, Add SK-5217	0	0.000	NA**					
NAC-1	Notification Appl Ckt 1	0	0.000	#14 Stranded	2.50		0.00	20.40	0.00%
NAC-2	Notification Appl Ckt 2	0	0.000	#12 Solid	1.59		0.00	20.40	0.00%
NAC-3	Notification Appl Ckt 3	0	0.000	#12 Solid	1.59		0.00	20.40	0.00%
NAC-4	Notification Appl Ckt 4	0	0.000	#12 Solid	1.59		0.00	20.40	0.00%
Aux	Aux Power Ckt	0	0.000	#12 Solid	1.59		0.00	20.40	0.00%
Total Standby Current (Amps)		0.140	0.126	Total Alarm Current (Amps)					
Standby Time in Hours		24	0.083	Alarm Time in Minutes (5 Mins)					
Total Standby AH Required		3.360	0.101	Total Alarm AH Required					
Total Combined AH Required			3.46	Command Shortcuts					
Multiply By The Derating Factor			1.20						
Minimum Battery Amphours Required			4.15						

Configure Circuits Print Page

** The SK-5208 and SK-5217 limits alarm current to 95mA per zone. The SK-5208 alarm current includes 10% of system zones in alarm, but in no case less than three zones per UL 864.

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MECHANICAL • ELECTRICAL • PLUMBING STRUCTURAL • FIRE PROTECTION

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<p>KELLER FIRE & SAFETY KANSAS CITY, MISSOURI 64105 TEL: (816) 374-8884 FAX: (816) 374-8884 - PREPARE FIRE EXTINGUISHERS - RANGE HOOD SYSTEMS - FIRE ALARM SYSTEMS - 24 HOUR SERVICE © copyright 2009</p>	<p>NO DATE REVISION CHKD</p>
<p>J31 DANCE CENTER 2710 INDEPENDENCE AVENUE LEE'S SUMMIT, MO 64064</p> <p>TENANT FINISH FIRE ALARM ADDITION</p>	<p>03/25/2020</p>
<p>FIRE ALARM PLAN AND DETAILS</p> <p>DESIGNED BY: AJS DRAWN BY: AJS CHECKED BY: JFH PROJECT ENGINEER: BC</p> <p>AS NOTED INSTALL ISSUED DATE: 3/25/2020 PROJECT MANAGER: JFH</p>	<p>FA100 1 OF 1 SHEETS</p> <p>298378</p>