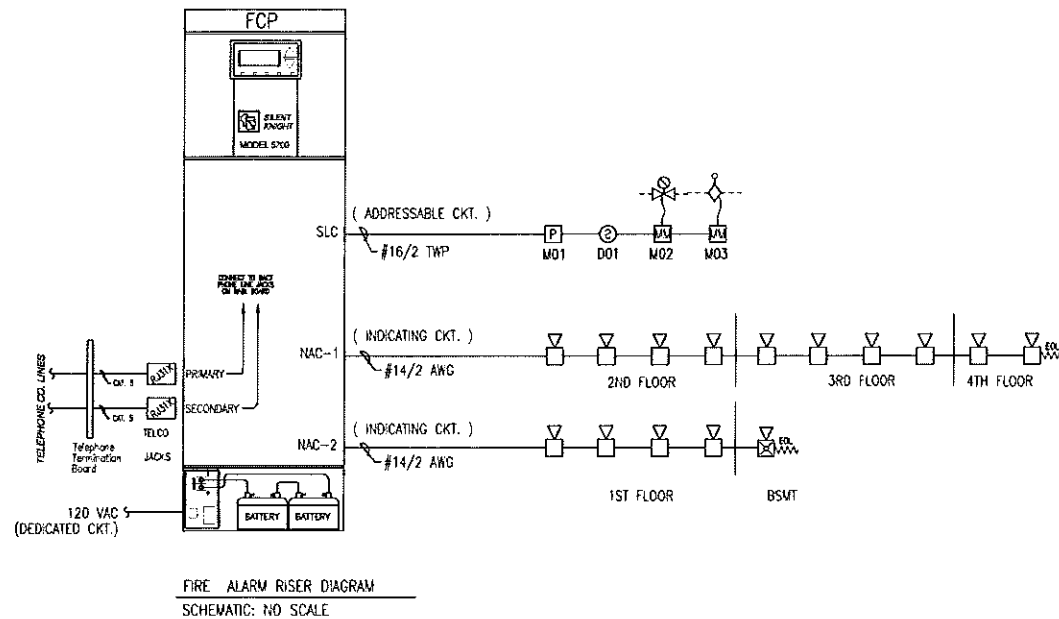


CYBERCAT 50 Battery Calculation				
PROJECT NAME: 43 CUMBERLAND APARTMENTS				
Required Standby Time: 24 Hours				
Required Alarm Time: 5 Minutes				
Regulated Load in Standby				
Device Type	Number of Devices		Current (Amps)	Total Current (Amps)
CONTROL PANEL CONTROLLER	1	X	0.20000	= 0.20000
SK - PHOTO SMOKE	1	X	0.00048	= 0.00048
SK - PULL STATION	1	X	0.00030	= 0.00030
SK - MONITOR MDL	2	X	0.00055	= 0.00110
TOTAL STANDBY LOAD				0.20188
Regulated Load in ALARM				
Device Type	Number of Devices		Current (Amps)	Total Current (Amps)
CONTROL PANEL CONTROLLER	1	X	0.32500	= 0.32500
SK - PHOTO SMOKE	1	X	0.00048	= 0.00048
SK - PULL STATION	1	X	0.00030	= 0.00030
SK - MONITOR MDL	2	X	0.00550	= 0.01100
NAC-1	1	X	0.29200	= 0.29200
NAC-2	1	X	0.29000	= 0.29000
TOTAL ALARM LOAD				0.91878
Battery Requirements				
Standby Load Current (Amps)	0.20188	X	Required Standby Time in Hours	24.00000
				= 4.84514
Alarm Load Current (Amps)	0.91878	X	Required Alarm Time in Hours	0.08333
				= 0.07657
Total Ampere Hours (before derating factor)				4.92171
Derating Factor				X
				1.2
BATTERIES TO BE PROVIDED (2 - 12v)				7 AH

NAC Circuit Voltage Drop Calculation					
PROJECT NAME: 43 CUMBERLAND APARTMENTS					
Circuit Number: FCP-NAC1					
Nominal System Voltage	24 volts	Wire Gauge	14	Resistance Per 1000	
Minimum Device Voltage	16 volts	Wire Gauge	14	6.14	
Distance from source to 1st device	50				
Wire Gauge for balance of circuit					
Max Output Current	1.5 amps				
Total Circuit Current	0.292 amps				
Circuit is within limits					
Device	Device Current	Distance previous device	Voltage at Device	Drop from source	Percent Drop
Device 1	0.029		23.91	0.09	0%
Device 2	0.029	30	23.86	0.14	1%
Device 3	0.029	30	23.82	0.18	1%
Device 4	0.029	30	23.78	0.22	1%
Device 5	0.176	50	23.73	0.27	1%
END			23.73	0.27	1%
END			23.73	0.27	1%
END			23.73	0.27	1%
END			23.73	0.27	1%
Totals	0.292	190			

NAC Circuit Voltage Drop Calculation					
PROJECT NAME: 43 CUMBERLAND APARTMENTS					
Circuit Number: FCP-NAC2					
Nominal System Voltage	24 volts	Wire Gauge	14	Resistance Per 1000	
Minimum Device Voltage	16 volts	Wire Gauge	14	6.14	
Distance from source to 1st device	50				
Wire Gauge for balance of circuit					
Max Output Current	1.5 amps				
Total Circuit Current	0.290 amps				
Circuit is within limits					
Device	Device Current	Distance previous device	Voltage at Device	Drop from source	Percent Drop
Device 1	0.029		23.91	0.09	0%
Device 2	0.029	30	23.86	0.14	1%
Device 3	0.029	30	23.82	0.18	1%
Device 4	0.029	30	23.78	0.22	1%
Device 5	0.029	30	23.75	0.25	1%
Device 6	0.029	50	23.71	0.29	1%
Device 7	0.029	30	23.68	0.32	1%
Device 8	0.029	30	23.67	0.33	1%
Device 9	0.029	30	23.66	0.34	1%
Device 10	0.029	30	23.65	0.35	1%
Totals	0.290	340			



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43 CUMBERLAND AVE APARTMENTS
41 CUMBERLAND AVE
PORTLAND, MAINE
FIRE ALARM SYSTEM RISER

DATE	3/11/2013
DESCRIPTION	ISSUED FOR REVIEW & APPROVAL
REVISION	0
DRAWN	JS UNICAD #13091
CHECKED	WAYNE HAWES NCET IV 90496
DATE	2/29/2013
REVISION	0
SCALE	1/8"=1FT



FA-2